REPORT RESUMES

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TRENDS IN POST-HIGH SCHOOL PLANS OVER A 11-YEAR PERIOD.

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A SURVEY WAS MADE IN 1961 OF ALL (APPROXIMATELY 45,000) GRADUATING SENIORS IN MINNESOTA HIGH SCHOOLS AND PRIVATE SCHOOLS TO LEARN OF TRENDS IN POST-HIGH SCHOOL PLANNING. THE SURVEY CONSISTED OF AN APTITUDE TEST, ACHIEVEMENT RECORDS, AND A QUESTIONNAIRE ENTITLED "AFTER HIGH SCHOOL--WHAT." IN 1962, A SAMPLE OF STUDENTS WAS SELECTED TO COMPLETE A QUESTIONNAIRE INDICATING THEIR MAJOR ACTIVITIES FOLLOWING HIGH SCHOOL GRADUATION. A SIMILAR SURVEY HAD BEEN MADE IN 1950 MAKING IT POSSIBLE TO COMPARE DATA COLLECTED IN EACH OF THE SURVEY YEARS. INFORMATION WAS ALSO GATHERED RELATING TO THE STUDENTS' FAMILIES AND THEIR SOCIAL, CULTURAL, ECONOMIC, FINANCIAL, AND PERSONALITY BACKGROUNDS. DATA WERE ANALYZED ACCORDING TO SEX, AREAS IN WHICH THE STUDENTS LIVED, ABILITY, AND EMPLOYMENT OF THE FATHERS. STATISTICAL METHODS INCLUDED A DETERMINATION OF DIFFERENCES BETWEEN PERCENTAGES, COMPARISON OF MEANS AND VARIANCE, AND COMPUTATION OF ZERO ORDER AND MULTIPLE CORRELATION COEFFICIENTS. THE OBSERVATIONS OF THE 1961 SURVEY CORRESPONDED TO SIMILAR OBSERVATIONS OF THE 1950 SURVEY. PRINCIPAL FINDINGS WERE (1) THE PROPORTION OF STUDENTS ACTUALLY ATTENDING COLLEGE RESEMBLED THE PROPORTION PLANNING TO ATTEND, (2) THE PROPORTION OF STUDENTS ATTENDING COLLEGE HAD INCREASED ONLY ONE-HALF OF ONE PERCENTAGE POINT PER YEAR OVER THE 11-YEAR PERIOD, (3) THE PROPORTION OF HIGH ABILITY STUDENTS PLANNING TO ATTEND COLLEGE INCREASED MORE THAN DID THE PROPORTION OF THE TOTAL GROUP OF STUDENTS, AND (4) PLANS TO ATTEND COLLEGE ARE RELATED TO ABILITY, ECONOMIC AND CULTURAL STATUS, SEX, FAMILY ATTITUDE, AND PERSONAL VALUES. SUGGESTIONS ARE INCLUDED FOR SENIOR GUIDANCE. (JC)

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Trends in Post-High School Plans Over an 11-Year Period

Cooperative Research Project no. 951-(SAE-8976)

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Chapter 1

INTRODUCTION

Problem on Which Research Was Focused

The plans of graduating high school seniors have both personal importance and social significance. Educational and vocational decisions largely determine the future satisfactions and fulfillment of students and the contributions they make to their community. The purpose of the study reported here was to learn what the current plans of graduating seniors are, how these plans have changed over slightly more than a decade, and what are the influences determining these decisions.

Each student should bear ultimate responsibility for his own decision, but limited social resources and the needs of society require the community to impose limits and requirements. Even in a society where education for all is advocated and the responsibility of the individual emphasized, not everyone can do what he wishes or what he and his family consider wisest. Social controls are necessary.

If policies underlying social controls are to be sound and if the controls are to be imposed with justice, schools, employers, and the government must act with wisdom. If individuals are to make decisions with reason, they and their counselors must be informed about the motives underlying decisions and the conditions from which these motives are derived. These are the broad problems with which this study was concerned.

In 1950, a survey of all graduating seniors in Minnesota high schools was made to identify the post-high school plans and conditions related to these plans. The survey revealed the extent to which all Minnesota students and a selected sample of high ability students planned to attend college, to enter nurses' training, to obtain other types of post-high school training, and to seek employment. These plans were related to tested academic ability, high school achievement, families' economic and cultural status, and other social and psychological variables. A follow-up study one year after these students graduated from high school revealed the extent to which stated plans during the senior year were indicative of actual behavior, and a further follow-up study in 1954 provided additional information about these pupils. Studies conducted in other states since 1950 have been modeled after this Minnesota study and have confirmed the Minnesota results. The current study consists of a repetition and an extension of the 1950 study so that comparisons can be made between past and present conditions and so that changes can be analyzed.

Since 1950, several developments have occurred in Minnesota's educational system. High school counselors have increased manifold. The training and competency of these counselors have been increased as a result of better undergraduate and graduate training programs, increasing professionalization of high school counseling, more school facilities and personnel, improvements in counseling and guidance methods, and the counseling provisions of the National Defense Education Act. The importance of higher education has received much attention, particularily since the accomplishments of Russian scientists became known in the United States. Parents, teachers, and others in the community are conscious of the importance of the utilization of manpower resources.

Major Objectives of the Investigation

The major objectives were:

1. To compare the proportions of 1950 and 1961 high school seniors who planned:
    a. to attend a college or university,
    b. to enter nursing,
    c. to seek other types of training,
    d. to enter military service,
    e. to seek employment.
2. To observe the above comparisons for the high ability students presumedly most competent to do college work and to analyze the relationships between ability and plans.
3. To compare the relationships between family social status and post-high school plans for the 1950 and 1961 high school seniors.
4. To compare the relationship between family economic status and post-high school plans for the two groups.
5. To study attitudes and values related to post-high school plans.
6. To select high schools which showed large increases in proportion of seniors planning to attend college and other schools which have shown no increases, or declines, in proportions of such students, and to make comparisons of these schools on the basis of changes in the community, school guidance programs, and other programs of the schools.

Chapter 2

RELATED RESEARCH

The behavior of post-high school planning has been studied for several decades and the literature on this subject is vast. A summary of the literature prior to 1954 was included in After High School--What?, (Berdie, 1954) and a more recent summary of later studies was published in 1961 by the United States Department of Health, Education, and Welfare (Beezer and Hjelm, 1961). No attempt will be made here to present in detail the studies since 1954, but some of these studies will be briefly summarized and an attempt will be made to generalize from their results. The studies will be divided into three groups, first those pertaining to restricted states, areas, or regions within the United States, next those pertinent to Minnesota insofar as the research reported in this volume is on Minnesota students, and finally research attempting to describe conditions in the entire United States.

State Studies

Since 1950 significant studies of post graduation plans of high school seniors, usually centering around plans to attend college, have been reported in Minnesota, Ohio, New Mexico, Montana, Indiana, Kansas, Kentucky, Arkansas, Wisconsin, Nebraska, Michigan, New York, and Illinois. Three general methods have been used to collect information in these studies, questionnaires given to students or their parents, interviews with students or their parents, and examinations of high school records or reports from high school personnel. Two types of information have been examined, that pertaining to the plans of high school students and that consisting of reports of the actual behavior of students, that is, not what they planned, but rather what they did.

The time at which information was collected varies from study to study. In some studies information regarding the plans of high school students was collected early in the high school career of the student. Usually information regarding plans was collected during the latter part of the student's senior year. Information concerning the actual behavior of the student usually was collected within one year of the time the student graduated from high school. Occasionally this information was collected at a later period. The sampling of students also varied from study to study. In some studies an attempt was made to gather information about all of the students in the state or area. In other studies information was collected from random or representative samples. In some studies information was collected only from students with specified abilities, high school records, residences, or sex.

Different conditions related to high school plans have been observed. Some studies concentrated on only one or two related variables, others considered numerous variables. Almost all studies paid attention to the sex differences related to post-high school plans. Many studies analyzed the influence of ability, as shown by either aptitude tests or high school records, and the influence of economic status of the family, as shown by occupation of father, income, or student's description of the family's economic level. Some studies considered the cultural-social level of the student as shown by parent's education, number of books in the home, or interests and activities of the family. Some studies analyzed the effect of where the students lived, comparing rural students and urban students, suburban students and metropolitan students, or students living varying distances from colleges. A few studies took into consideration the size of the high school, and a few the personality characteristics, attitudes, and values of students and their families. Only one of the studies reviewed here considered the influence of race, comparing white and colored students.

When the studies are considered together and one examines the relationships found between the variables studied and college attendance, one is immediately impressed by the almost completely postive results reported. Each of the studies that analyzed sex differences found differences. Each of the studies that examined relationships between ability and post-high school plans found relationships. Every study but one, and that one studied a very homogeneous sample, on the relationship between economic status and plans found a relationship. Each study analyzing the influence of cultural level found a difference. All but one of the studies examining the influence of where the student lived found a relationship. Consistently the studies found a relationship between the size of the high school and post-high school plans and almost as consistently the few studies that analyzed the relationship of plans and personality variables found a significant relationship. Apparently investigators either have excluded in their studies variables not related to post-high school plans or they have failed to report negative results.

The almost complete agreement found for these relationships regardless of variables examined is not surprising when one considers that the variables, themselves, are highly intercorrelated. The sex variable is perhaps the only one that does not have at least a moderate relationship with the other indices. Ability, economic level, cultural level, and area from which the student comes all seem to be related. Children of men in professions tend to obtain higher ability scores than do children of men in unskilled jobs. Men in high economic levels tend to be better educated. Urban-rural differences are related to income, education, and financial status. High school size is related to area. Some evidence suggests that even tenuous personality variables are related to area and certainly to social and cultural level. Simple, first-order relationships between these variables and the plans of students would all tend to be in the same direction.

A few studies have attempted to analyze interactions, that is, when one holds ability constant, what does this do with the relationship between economic status and post-high school plans. In general, when such analyses have been made, the size of the observed relationships tends to diminish, but the significance remains. For example, when in these studies one compares students who are planning to attend college and those who are planning otherwise on the basis of ability and economic status of the family, large and significant differences are found. When one takes groups of students planning to attend college and planning otherwise, but matched on the basis of economic status, one still finds a relationship between ability and post-high school plans, although this relationship tends to be different from the relationship observed with the total group disregarding economic status.

The 1950 study of Minnesota students used information from a questionnaire entitled, "After High School--What?," and test scores obtained from about 24,000 or over 90 per cent, of high school seniors in public and private schools. About one-third of these students were planning to attend college. Substantially more men than women so planned, and the proportion of students planning to attend college was much greater among urban than among farm children. A marked relationship was found between plans and college aptitude as indicated both by tests and high school grades, and substantial relationships were found between plans and family economic status and between plans and family cultural status. Interactions between sex and ability, area and sex, and the other variables as they were related to post-high school plans were analyzed and the general picture emerged that a student's post-high school plans were simply one part of a complex and elaborate network of psychological and social variables.

"The forces influencing the decisions of the 25,000 boys and girls we studied are complex and present a puzzle of causal relationships.... the desire to attend college is closely related to our class structure. This class structure, in turn, can be conceptualized successfully in terms of economic status and cultural status. This conceptualization helps explain in part why some high school seniors plan to attend college and why others make alternative plans" (Berdie, 1954, p. 86).

In 1950, the plans of 1,053 Cleveland, Ohio, high school seniors were studied and 50 per cent intended to attend college. Post-high school plans were found to be related to sex, ability, and family economic level (White, 1952).

The plans of 1,742 above-average high school seniors in New Mexico were studied in 1952-53, and another group of 1,079 high school seniors from the upper 25 per cent of the class studied in 1954, using both interviews and records. In the first group, about 62 per cent planned to attend college and approximately 55 per cent actually attended college. In the second group approximately 59 per cent attended college. One or both of these studies identified relationships between plans and sex, economic status, cultural status, and region in which the student lived (Smith and Mathany, 1960).

In 1955, 3,479 high school graduates in the upper 10 per cent of Indiana high school classes were studied and high school principals reported that 65 per cent of this top one-tenth attended college with college attendance related to sex and economic status (Beezer and Hjelm, 1961).

Studies in Kansas from 1955-57 revealed that 40 per cent of high school seniors attended college with 65 per cent of the top one-third doing so. College attendance was related to sex, economic status, region in which the student lived, and size of high school (Beezer and Hjelm, 1961).

A series of reports are available from Kentucky extending from 1956 through 1960. The State Department of Education reported that between 1956 and 1959 from 31 to 35 per cent of high school graduates in that state attended college (Beezer and Hjelm, 1961). In 1959, Youmans reported that in 480 rural low-income families about 25 per cent of the children planned to attend college and these plans were related to ability and attitudes (Youmans, 1959). McDanial and Forman in 1960 reported that of 3,178 Kentucky students, the top 15 per cent of the high school class, 76 per cent attended college and attendance was related to sex and ability, but not related to the area in which the student lived.

A comprehensive study in 1957 of Arkansas high school seniors showed that of 12,746 seniors who responded to questionnaires, 45 per cent planned to attend college, but letters to principals later revealed that only 26 per cent actually did so. Plans and attendance were related to sex, ability, economic level, cultural level, area in which the student lived, color of the student, and size of the high school. In this same group, of the top one-third of the students, 56 per cent actually attended college and of the top one-fourth, 47 per cent attended college (Stroup and Andrew, 1959).

Another comprehensive study was reported by Little (1959) of high school graduates of 1957 in Wisconsin. A random one-sixth sample of high school seniors consisting of 5,679 students was studied with questionnaires completed by both students and parents. Of these students, 30 per cent planned to attend college and 29 per cent actually attended. Plans were found to be related to sex, intelligence, economic level, cultural level, area in which the student lived, size of high school, and perhaps, although less definitely, attitudes or personality. In this group the top 15 per cent of the students were studied separately and here 65 per cent were planning to attend college, again with the same variables, for the most part, related to plans.

Two studies have been reported of Chicago, Illinois high school graduates of 1960 and 1961. January graduates of 1961 numbered 6,251, June graduates of 1960 numbered 12,653. In each of these groups 48 per cent were planning to attend college (Anonymous, 1960).

Generalizations from these state-wide or in-state studies are difficult insofar as seldom are studies conducted in different states during the same years, seldom are the populations defined in the same way, and seldom are the same or even comparable methods used for eliciting the data. The results reviewed here do suggest that the proportions of students of different kinds planning to attend college vary from state to state, that the proportions vary from year to year, and that possibly the influences of different conditions are not consistent from state to state and from year to year within the same state. One could generalize and say that in every state studied there is a tendency for more bright students to attend college than for dull students, for more wealthy students to attend college than poor students, for more men to attend college than women, and for more students from homes with high parental education to attend college than from homes with low parental education. In general, where a student lives within a state seems to have some influence.

Minnesota Studies

A summary prepared by Corcoran and Keller (1957) reveals for at least one state changes in proportions of high school graduates attending college within one year of graduation for three separated periods of time. The proportion of Minnesota men and women graduating from high school in 1938, 1945, and 1950, who attended college is shown in the table below.

Table 2-1

Proportion of Minnesota High School Graduates Attending College Within One Year of Graduation for 1938, 1945, and 1950

Group	Class of 1938 %	Class of 1945 %	Class of 1950 %
Men	24	24	36
Women	20	21	27
Total	23	23	32
Metropolitan	26	25	39
Non-Metropolitan	21	--	28

(College attendance of Minnesota high school seniors, a report prepared for the Governor's Committee on Higher Education by M. Corcoran and R. J. Keller, Bureau of Institutional Research, University of Minnesota, 1957, page 8.)

Some of the studies reported of Minnesota students during the past decade allow inferences to be made concerning differences within a state. In 1953, Nelson and McFarland (1962) studied the plans of 396 rural high school graduates. Twenty-three per cent were planning to attend college. Of students in the upper one-half of the class, somewhat fewer than 50 per cent were planning to attend college. In 1955, a report was distributed by the Guidance Office for the St. Cloud Technical High School. Of 225 graduates, 164 completed questionnaires and indicated that 30 per cent attended college. In 1958, Johnson reported that of 657 Minneapolis high school graduates who were in the upper 17 per cent of their class, 81 per cent attended college. There was a marked sex difference. In 1960, Hagenah studied the educational plans of 703 Minnesota high school honors graduates as these plans were reported in a newspaper story and found that 78 per cent planned to attend college. In 1960, the Student Counseling Bureau of the University of Minnesota studied the plans of 47,394 high school juniors and found that 40 per cent planned to attend college with a marked relationship between the plans of these students and their scores on college aptitude tests.

Nation-Wide Studies

Because of the differences among states and years, as well as the differences resulting from varying methods, estimates for the entire United States are difficult to make. In 1954, Wolfle estimated that 35 per cent of high school graduates in the United States entered college and approximately 21 per cent of high school graduates eventually graduated from college. Of the total age group at that time, about 57.5 per cent graduated from high school and 20.2 per cent of the age group entered college, with almost 12 per cent of the age group graduating from college.

Cole, in 1955, reported a study of a 5 per cent national sample of public high school seniors. His sample consisted of 33,000 students who provided information on a questionnaire. Of these students, 45 per cent planned to attend college and these plans were related to sex, ability, economic and cultural status, and area in which the student lived. Of students who were roughly in the top 30 per cent of high school seniors in this sample, about 63 per cent planned to attend college and approximately 54 per cent actually attended college shortly after graduating from high school. Again, for this high-ability group, sex, intelligence, economic, and cultural differences were found.

In 1955, Flynt estimated that of all high school graduates in the top one-quarter of their class, approximately 50 per cent attended college. He also reported that about 60,000 persons of equal ability never did graduate from high school. Bridgman reported in 1957 that in the United States 46 per cent of high school graduates may have attended college at some time and that of the upper 30 per cent in the high school class, 69 out of one hundred attended college. Within the upper one-tenth of the high school graduating class, three out of four students attended college.

A study in 1959 of a probability sample of United States parents indicated that parents of 49 per cent of children had plans for their children to attend college, with these plans related to economic and cultural level of the home and color of students (Lansing, Lorimer, and Moriguchi, 1960). Using an extremely selected sample in 1957, Thistlethwaite (1958) reported that of 15,000 near-winners in the National Merit Scholarship competition, perhaps the upper 6 per cent of the high school population, 96 per cent attended college with such attendance related to sex, ability, and cultural level of the home.

The Bureau of Labor Statistics (1962) reported that of 1961 high school graduates, 48 per cent attended college, with 45 per cent of the graduates being full-time college students. College attendance was related to sex.

A table below reproduced from Thistlethwaite's paper (1958) provides some estimates of talent loss among high-ability students.

Table 2-2

Estimates of Talent Loss Among Students of High Ability[1]

Source	Population	Date of graduation from high school	Estimated percentage not attending college
National Merit Scholarship program	Merit scholars (N=827)	1957	0.2*
	Finalists (N=6428)	1957	3.1
	Semifinalists (N=7690)	1957	5.1
	Total (N=14,945)	1957	3.9
Terman and Oden (9)	Highest 1 or 2 per cent by IQ in California schools	1928	12
Phearman (10)	Highest 2 per cent by achievement tests among Iowa high school graduates	1947	8
Wolfle (11)	Highest 2.8 per cent of high school graduates on intelligence test	1953	39
Phearman (10)	Highest 9 per cent of Iowa's high school graduates	1947	36
Iffert (1)	Highest 10 per cent in high school graduating class	1950	28
Corcoran and Keller (12)	Highest 15 per cent by IQ of Minnesota high school seniors	1950	33#
Wolfle (11)	Highest 8.8 per cent of high school graduates	1953	45
Educational Testing Service (2)	Highest 10 per cent by aptitude test of public high school seniors	1955	30
Iffert (1)	Highest 30 per cent in high school graduating class	1950	30
Wolfle (11)	Highest 31 per cent of high school graduates	1953	53
Educational Testing Service (2)	Highest scoring 30 per cent of public high school seniors	1955	47

*Two students awarded scholarships are having their scholarships held for 1 year.
#Percentage attending college within 4 years of graduation.

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[1] Reprinted from Science, October 10, 1958, Vol. 128, No. 3328, pages 822-826, "The Conservation of Intellectual Talent," by Donald L. Thistlethwaite.

Obviously, estimates of talent loss depend on how the population was defined and when the study was made. The talent loss in 1953 of the highest 31 per cent of high school graduates amounted to 53 per cent. Four years later the talent loss of merit scholars, perhaps in the upper 1 per cent, amounted to .2 per cent. The figures suggest that although the talent loss is not large proportionately, the thousands of high-ability high school graduates who fail to attend college should cause distress to those who are eager to increase the number of well-educated persons in the country.

A report (Walker, 1962) provided interesting information concerning changes over time in the educational level of the country. The chart, reproduced below shows that almost one-half of the young men today have had more schooling than their fathers had, and an additional 40 per cent have had as much schooling, with only one out of ten having had less schooling than his father had. Recently about 68 per cent of young men graduated from high school, as compared to about 33 per cent of their fathers. Today of every one hundred young men who have fathers who did not graduate from high school, over 15 per cent, themselves, will graduate from college. For every one hundred young men today whose fathers graduated from high school but did not attend college, more than one-third will graduate from college. Of the young men whose fathers are college graduates, eventually almost 80 per cent will graduate from college.

Resumé

Although much of our information is incomplete, it does allow us to make some generalizations concerning the post-high school plans of high school graduates, particularly as they involve college attendance. Many social and psychological variables are related to these plans. These plans and their determinants vary from state to state and no one state can be considered typical of the entire country.

> The proportion of high school graduates attending college is steadily increasing. More men than women attend college; college attendance is related to economic and occupational status, as well as to cultural and educational status; and it makes a difference as to where a student lives within a state, particularly in relationship to the location of colleges.

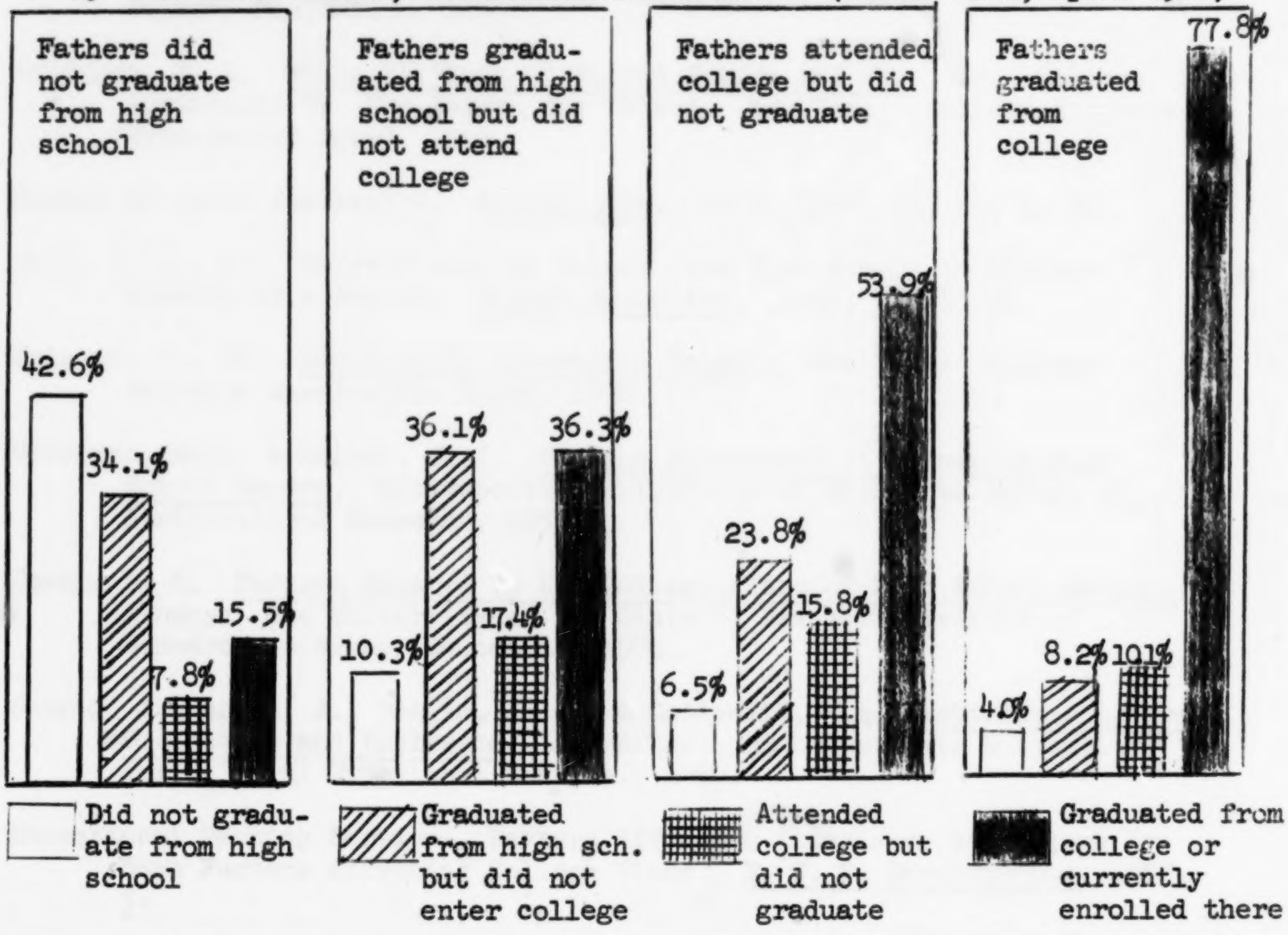
These many variables not only set limits and provide opportunities which directly effect the decisions of students, but also they develop attitudes and expectations and these values are the implements or the means through which social conditions determine the decisions and choices of students. For any given student a single variable may decide what he does. A student whose family strongly opposes college may fail to attend college in spite of all other conditions. For no single group of students will any primary variable be located and in any group of students one can expect to find a complex of conditions related to post-high school decisions.

Educational Level of Young Men Today Compared with That of Their Fathers

About five out of every 10 young men have had more schooling than their fathers had; four have had about as much; one has had less. Evidence to this effect was gathered by the U.S. Bureau of the Census in October 1960, from a sample of 4,300 men between the ages of 20 and 24 years.

The Census Bureau's survey shows a marked relationship between the educational status of the sons and that of their fathers. Only 23.3 per cent of the young men whose fathers had not finished high school attended college; but the percentage rose with each higher level of the fathers' schooling: To 53.7 per cent for those whose fathers had stayed in school until they graduated from high school, 69.7 per cent for those whose fathers had had some college education, and 87.9 per cent for those whose fathers were college graduates.

A comparison of the two generations shows that the young men, generally speaking, were getting more schooling than their fathers got. About 68 per cent had graduated from high school, compared with 33 per cent of their fathers, and 35 per cent had entered college compared with 14 per cent of their fathers. It is too early to compare the two generations as to the number of college graduates: many of the younger men were not old enough, at the time of the survey, to have finished college. (These data are from Current Population Reports: Population Characteristics, Series P-20, No. 110, U.S. Bureau of the Census, Washington D.C., July 24, 1961.) ---By Rose Marie Walker, educational statistician (School Life, April 1962)



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Chapter 3

PROCEDURES

The Questionnaire

To gather information about students, a questionnaire entitled, "After High School--What?" was developed. This questionnaire was similar to one used in 1950, but some modifications were made. A copy of the questionnaire is included in the appendix of this report. The most significant change consisted of the addition of 25 items at the end of the questionnaire to elicit information regarding attitudes and values.

The questions duplicated from the 1950 questionnaire were left completely unchanged. In the earlier study, comparisons had been made between information provided by students on the questionnaire and information obtained from parents in interviews and the data provided by the questionnaire in 1950 appeared reliable. The assumption was made that this was true also in 1961.

Test Scores

For most students a score on a college aptitude test was available. This test, the Minnesota Scholastic Aptitude Test (MSAT), was administered during the winter of the student's junior year in high school. It provided a single score predictive of success in Minnesota colleges. The test is a shortened, time-limited form of the Ohio Psychological Examination Form 26 developed by Professor W. L. Layton and Professor H. A. Toops (Berdie, Layton, Swanson, et al., 1962).

For each student a high school percentile rank was available. The high school percentile rank is based on all of the grades earned by the student during his freshman, sophomore, and junior or sophomore and junior years in high school, depending on whether he is in a three or four year high school. The rank shows the relative standing of the student in his class. A percentile rank of 100 places him within the top 1 per cent; a percentile rank of one places him within the lower 1 per cent; a percentile rank of 47 indicates that 47 per cent of the students obtained grade point averages equal to or less than his. The high school percentile rank is one of the best predictors of academic success in Minnesota colleges. Whereas the Minnesota Scholastic Aptitude Test tends to predict grades as well as would be indicated by a correlation coefficient of .45-.55, the high school percentile rank provides a correlation coefficient of from .50-.60. Combined, high school percentile rank and Minnesota Scholastic Aptitude Test score predict as well as would be indicated by a correlation coefficient of between .55-.65.

School and Community Information

Information concerning the status of the school and community in 1961 and selected information concerning school status in 1950 were collected through the means of a school questionnaire. A copy of this is included in the appendix. This questionnaire was mailed to selected school principals after the cooperation of the school superintendents had been obtained through a letter. Copies of the letter and the instructions are included in the appendix.

Sample of Students

Each of the 560 high schools in Minnesota was asked to have its graduating seniors complete the questionnaire in January and Februrary of 1961. These included all of the public and private high schools in the state. The questionnaire was given to seniors in 551 high schools, or 98 per cent of all schools. The total number of students completing usable questionnaires was 44756 or 97 per cent of graduating seniors in the state. For almost all students who completed the questionnaire, test scores were available, although, some of the students who had taken the test did not complete questionnaires and a few of the seniors who had completed the questionnaires had not been tested in their junior year.

Sample of Schools Included in the Study

Before the schools to be included in the special study could be selected, the data from the questionnaires had to be tabulated. Selection was based on the size of the graduating class and the changes in proportions of students in the senior classes planning to attend college from 1950 to 1961. Schools first were divided into three groups according to size of senior class. The small school group consisted of schools having thirty or fewer seniors, the medium size group had between 31 and one hundred seniors, and the large school group contained those with more than one hundred graduating seniors.

Within each group, the 10 per cent of the schools showing the largest percentage increase in seniors planning to attend college and the 10 per cent showing the smallest increase (or largest decrease) in college-bound students were selected for study. Questionnaire returns are described in Chapter 17.

Analysis of the Student Data

Analysis was done for groups divided according to sex and according to areas in which the students lived. The first group consisted of all students who on the questionnaire indicated they lived on farms. This group was called the farm group. The second group consisted of the metropolitan students who came from schools in Minneapolis, St. Paul, Duluth, and suburbs of those cities. The last group consisted of all other students, or students who lived in villages, towns, and small cities.

Each of these six sub-groups was further divided according to the students post-high school plan. Thus, within each sub-group was a smaller sub-group bound for college, another planning to seek jobs, another planning to attend business school, etc.

Another and separate analysis was done for high-ability students. All of the students who had Minnesota Scholastic Aptitude Test scores of 45 or above, 7,351 students, were selected and analyzed as was the total group. These high-ability students consisted of the top 17 per cent of the 1961 seniors and would compare favorably to the upper 25 per cent of the freshmen entering Minnesota colleges. One can assume that practically all of these high-ability students had more than sufficient ability to succeed in almost any Minnesota college.

A further and finer analysis was done of high ability students who indicated that their fathers were in either skilled or unskilled trades.

Follow-Up Study

In the spring of 1962, a year after the seniors had graduated from high school, a sample of seniors who had completed the questionnaire was selected from the total population so as to provide a random sample consisting of approximately one thousand students from metropolitan schools and one thousand from non-metropolitan schools. The actual sample sizes were 1082 metropolitan and 1021 non-metropolitan students. The addresses used in locating these students were those which they had provided when they were juniors and for the total group addresses were not available for 173 because the student's handwriting was illegible or he had failed to provide the information. This left a total sample of 1930.

Each student in the follow-up study was sent a letter requesting participation in the study and he was asked to return a postcard questionnaire on which he was asked to check his principle activity of last year and indicate the type of work or name of school if he checked these categories. He was also asked a question regarding any changes of plans he might be contemplating for the following year and a question regarding his marital status. Four follow-up letters were mailed to the non-respondents at two to three week intervals. The responses to the follow-up questionnaire are presented in Table 3-1.

Table 3-1

Responses to Follow-Up

Total Questionnaires Mailed = 1930	Metropolitan (971 Mailed)		Non-Metropolitan (959 Mailed)	
	No.	%	No.	%
Returned by mail	841	87	783	82**
Returned by phone	59	6	---	--
Unlocatable	71	7	63	7
Non-respondents	---	--	113	12
Total returns	900	93	783	82

All Returns: 1683 (87%)

Total Unlocatable: 134 (7%)

Total Non-Respondents: 113 (6%)

** Difference between returns by mail--metropolitan vs. non-metropolitan areas (87% vs. 82%) significant beyond .01 level.

Eighty-four per cent of the sample had replied soon after the fourth follow-up letter was mailed. The return from the metropolitan areas was 87 per cent, significantly greater than the 82 per cent return from the non-metropolitan areas. This perhaps was due to the fact that a greater proportion of the metropolitan students was attending the University and was therefore more likely to respond to a questionnaire on the letterhead of the University. After the mail return had been completed, the non-respondents of the Minneapolis-St. Paul area were followed-up by telephone. Nearly a third of these had left the area and could not be located, but information was obtained for the remaining two-thirds of the non-respondents. The information requested was simple enough so that it could be obtained over the phone from almost anyone in the student's household. The percentage of returns in this way was increased to 93 per cent for the metropolitan area. This included 100 per cent of all metropolitan students located.

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Chapter 4

A ONE YEAR FOLLOW-UP OF THE GRADUATING SENIORS

In 1951, a follow-up survey of a sample of the 1950 graduates was conducted to determine the extent to which the plans made by the seniors in the middle of their senior year were actually fulfilled during the following year. Although many individuals changed their plans, the overall proportions of students actually pursuing the various activities were close to the proportions making such plans. Conditions in 1961 differed considerably from those of a decade earlier and although it was expected that the overall "realizability" of plans would be essentially the same as in 1950, a similar follow-up survey was conducted in the late spring of 1962.

The respondents were compared to the total sample with regard to sex and plans, and were found to be representative of the entire group although a slightly larger proportion of the respondents had planned originally on college. This difference was not statistically significant, however. The respondents had somewhat higher MSAT scores than did the total sample. The mean MSAT score of the non-respondents was approximately one-half a standard deviation below that of the respondents. The somewhat larger proportion of respondents who originally had planned on college was in part accounted for by the larger proportion of college-going metropolitan students responding to the follow-up questionnaire. Unlocatable students proved to be somewhat atypical in regard to their post-high school plans, but their numbers were not large enough to significantly bias the returns. The original plans of the follow-up respondents are shown in Table 4-1.

Follow-Up Results

The activities actually undertaken by these respondents are also shown in Table 4-1. These comparisons show that in 1961, as in 1950, the proportions of students with various high school plans are rough indicators of the actual proportions of students who will be entering the activities related to these plans. A smaller proportion of girls actually attended college than originally planned to, and a larger proportion of students had jobs than planned. On the follow-up questionnaire the students were asked to indicate their "major activity" during the past year. Some students apparently attended short business or vocational courses before getting jobs and therefore reported that their major activity was "working." This could help account for the slightly lower proportion of students reporting trade and business schools in the follow-up study and also for the higher proportion of students working. A few of the working students were undoubtedly a part of the group which enters college each fall but drops out quickly during the first few months. As a whole the differences in proportions of students actually entering the various activities as

Table 4-1

Percentage Distribution of Original Plans and Activities Actually Undertaken by Follow-Up Respondents

Post-High School Alternatives	Male								Female								Total	
	Metro		Non-Farm		Farm		Total		Metro		Non-Farm		Farm		Total			
	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %	Plan %	Act. %
Get a Job	11	21	12	16	25	27	14	21	27	39	29	36	38	49	30	40	22	30
Work for Parents	0	0	2	1	13	17	3	4	0	0	0	0	0	2	0	1	2	2
College	60	56	54	53	27	28	51	50	50	45	43	37	29	26	44	39	48	44
Trade School	7	4	8	6	10	7	8	5	4	3	4	4	4	4	4	3	6	4
Business Sch.	1	2	0	2	2	0	1	1	5	3	5	5	12	5	6	4	4	3
Other School	0	0	1	0	1	0	1	0	3	1	3	1	4	2	3	1	2	1
Marriage	--	--	--	--	--	--	--	--	2	4	1	6	2	8	2	5	1	2
Nursing	--	--	--	--	--	--	--	--	4	3	13	8	8	2	7	4	4	2
Military	12	15	18	22	18	19	15	18	--	--	--	--	--	--	--	--	8	9
Other	8	2	5	1	3	2	6	2	5	3	1	2	4	1	4	2	5	2
N	467		213		176		856		433		230		164		827		1683	

compared with the proportions of those who planned on them were similar to the differences found in 1950.

Furthermore, the overall "realizability" of the plans of the 1961 seniors did not differ greatly from the corresponding figure in 1950--67 per cent in 1961 versus 64 per cent in 1950. The overall extent to which the males and females fulfilled their plans was not significantly different for these 1961 seniors. Significantly fewer of the farm students, however, 59 per cent, fulfilled their plans than did students from the metropolitan area, 68 per cent, and the non-farm area, 71 per cent. The extent to which the different groups fulfilled their plans of the previous year is shown in Table 4-2.

> Although a third of the respondents did not fulfill the plans they had made midway in their senior year, as mentioned above, the proportions who finally ended up in the various activities corresponded quite closely to the proportions originally making such plans.

The extent to which different plans were realized varied. While 84 per cent of the students who said they were planning on college actually entered college, only 20 per cent who planned on business school followed these plans. A few more percentage points probably should be added to this figure to account for the students who took only short courses in business school. While 84 per cent of the students planning on college actually entered college, 91 per cent of the students who actually entered college had originally planned to do so. Marriage was the plan most frequently fulfilled for the girls, since 11 of the 13 girls who had originally so planned did get married. On the other hand, of the 42 girls who reported they were married and not engaged in any other major activity at the time of the follow-up study, only 11 of them, or 26 per cent, had expressed any intention of marriage on their original questionnaire. The percentage of students following their original plan to enter the military service was also lower than might be expected. There appeared to be considerable interchange between the plans and actual activities of those students planning on either jobs or military service. Twenty-three per cent of those who had planned on entering the service obtained jobs instead, and 20 per cent of those planning on jobs went into the military service. These figures of 23 and 20 per cent represent about half of the students who in each case did not carry out their original intentions.

> This investigation of what happened to those who did not fulfill their original plans revealed some interesting findings. For the most part, the activities entered by those not following original plans generally tended to be either logical substitutes or possible stepping stones to the fulfillment of their original intentions.

For example, among the girls, most who planned on getting a job and did not, got married, and the majority of those who planned on business school actually got jobs. Among the males, in addition to the changes regarding jobs and military service, about 5 per cent of those who intended to enter college instead found jobs. On the other hand,

Table 4-2

Percentage Following Original Plans

Original Plan	Male				Female				Total
	Metro	Non-Farm	Farm	Total	Metro	Non-Farm	Farm	Total	
	%	%	%	%	%	%	%	%	%
Get a job	58	62	55	58	85	77	74	80	73
Work for parents	0	25	57	52	0	0	0	0	48
College	87	89	77	86	83	80	83	82	84
Trade School	26	53	44	38	47	44	67	50	42
Business School	17	0	0	9	14	42	21	23	20
Other School	0	50	0	20	0	12	14	8	10
Military Service	51	74	47	57	--	--	--	--	57
Nursing	--	--	--	--	26	52	31	39	39
Marriage	--	--	--	--	71	100	100	85	85
Other	0	0	0	0	0	0	14	3	1
N	312	157	97	566	301	158	102	561	1127

7 per cent of those planning on getting a job found themselves in college.

Particular attention was paid to the 125 students in the follow-up group who did not follow their plans to enter college. Of these students not attending college the year after graduation, 37 or 30 per cent, stated on their follow-up questionnaires that they intended to go to college the following year. Since almost all of these students were working, it is reasonable to assume that many of them found it necessary to accumulate some savings before they were able to continue their education. The remaining 88 persons in this group apparently either had given up their college aspirations altogether, or at least did not anticipate entering college for some time.

The 125 students who did not follow their college plans were compared on a number of the original questionnaire variables with the 677 persons who did. The groups were compared on: education of mother and father, MSAT scores, description of family economic status, influence of marriage on plans, reasons for making original plans, family's attitude toward college attendance, and number of books in the home. Fulfillment of college plans was found to be significantly related to parental education for the metropolitan students. Twenty-five per cent of the fathers of students following their college plans had one or more college degrees, compared to only 7 per cent of the fathers of the non-college-going group. The corresponding figures for mother's education were 16 per cent and 3 per cent, respectively. Among the non-metropolitan groups differences were in the same direction but were statistically significant only in the case of mother's education.

Description of family economic status was not related to whether or not these students carried out their college plans, nor were the reasons given for making these plans. Those who did not get to college, however, reported significantly more often on their original questionnaires that marriage or the early prospect of marriage had influenced their planning.

How their families felt about their college plans also differentiated significantly between the two groups, and as would be expected, those who did not fulfill their plans reported more often that their families were indifferent or did not want them to go, and less often that their families wanted or insisted that they go.

Among the non-metropolitan students of both sexes, the number of books in the home was reported to be significantly higher for students fulfilling their plans than for those not doing so. Among the metropolitan students differences on this variable approached but did not meet the .05 per cent level of statistical significance.

The college aptitude of the two groups, as measured by the Minnesota Scholastic Aptitude Test, differed quite considerably. The mean MSAT score of those who followed their plans was 40.9, which is nearly a full standard deviation above the 32.6 mean score achieved by the college-bound students not following their plans. Only 31 per cent of the non-college-attending group exceeded the median score of entering freshmen at the University of Minnesota, whereas 57 per cent of the college planners who attended, did so. The difference between means was not only highly statistically significant (t=7.11), but was also large enough to be of considerable practical significance.

Summary

The "realizability" of the plans that the graduating high school students make midway in their senior year has not changed a great deal over the past decade, in spite of substantial changes in prevailing conditions. Even though only 67 per cent of the students actually followed the plans they made as seniors, the actual proportions of students entering various activities corresponded closely with the proportions making these plans.

> High school graduates with certain plans fulfilled these plans to a far greater extent than did those with other plans. Students who were planning on college fulfilled their intentions to a greater extent than did those with most other plans. Most of the students planning on college whose abilities and home environments appeared conducive to college attendance went to college. Those with college plans whose backgrounds were similar to those of others with college plans went to college, in contrast to those students with college plans whose backgrounds and other characteristics tended to resemble students who got jobs. Many high school seniors who do not follow their plans immediately still intend to, but not until after a year or more after they graduate from high school.

Chapter 5

A DECADE PLUS ONE

The information in this report is derived primarily from the high school graduates of 1961 but in some chapters comparisons are made between these students and those of more than a decade earlier. The purpose of the study was to provide a description of the current generation of high school graduates in Minnesota and also a basis for inferences about changes during the past 11 years. The present chapter deals more directly with comparisons between the two generations.

Several questions are relevant. How do the two generations differ? To what extent have the proportions of high school seniors making various post-high school plans changed during the 11 years? To what extent have changes occurred in the relationship between these plans and variables such as sex, area, socio-economic status, and ability? What are possible reasons for any observed changes and what are the implications of these changes? The information in this chapter touches on these questions.

Changes in Plans

In 1950, 24,892 or approximately 95 per cent of all twelfth grade students in Minnesota's public and private schools completed a questionnaire reporting their plans for the year following high school graduation. Similar questionnaires were completed by 44,756 or 97 per cent, of seniors from the graduating class of 1961. This is an 80 per cent increase in the number of seniors, consisting of both increases in numbers of persons this age and greater proportions of the age group completing high school. From 1950 through 1960, Minnesota's population increased from 2,982,483 to 3,413,864 or 14.5 per cent.

Table 5-1 shows the per cent of students by sex and area expressing each of the several post-high school plans. The total size of each subgroup is indicated by the last figure in each column. In 1950 more than one-third of Minnesota high school graduates planned to obtain jobs during the following year. Eleven years later this proportion was less than one-quarter. The percentage of boys graduating from high school who planned to obtain jobs dropped from 30 per cent to 15 per cent, or it was just halved.

> This, in spite of an almost doubling of the number of male high school graduates, the absolute number of boys planning to enter the labor market immediately after graduations was somewhat less in 1961 than in 1950.

Table 5-1

Comparison of Post-High School Plans of 1950 and 1961 Seniors by Sex and Area

Plan	Male								Female								Total	
	Metro		Non-Farm		Farm		Total		Metro		Non-Farm		Farm		Total			
	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61
Get a job	30	12	32	15	28	21	30	15	41	30	38	29	46	40	41	32	36	24
Work for parents	2	1	4	2	35	15	12	5	0	0	1	0	4	1	2	0	7	3
Go to college	50	54	43	48	20	28	39	45	40	45	37	38	24	25	34	37	36	41
Go to trade school	7	8	7	8	6	9	7	8	1	3	2	5	2	5	1	4	4	6
Go to business school	2	1	3	2	2	2	2	2	6	6	8	8	8	9	8	7	5	5
Go to other school	2	1	2	1	2	1	2	1	4	3	4	5	5	5	5	4	3	3
Enter military service	5	17	8	20	5	20	6	18	0	1	1	1	1	1	1	1	3	9
Enter Nurses' Training	0	0	0	0	0	0	0	0	5	6	7	8	7	8	6	7	3	4
Other	2	6	1	4	1	5	2	5	2	6	2	6	3	6	2	6	2	6
Total	100	100	100	100	99	100	100	99	99	100	100	100	100	100	100	100	99	101
N 1950	3881		4201		3297		11379		4405		4873		4235		13513		24892	
1961		8267		7917		6022		22206		8095		8400		6055		22550		44756

Among the girls, although the relative number planning to seek jobs dropped by more than one-fifth, the absolute number of young women planning to enter the labor market actually increased by more than 1500.

The percentage of students planning to work for their parents dropped markedly. Almost all of these students both in 1950 and in 1961 lived on farms and were boys. In 1950 of all boys graduated from high school and living on farms, slightly over one-third planned to work for their parents. In 1961 only 15 per cent had such plans. In Minnesota opportunities on family farms either are becoming increasingly restricted or are attracting fewer and fewer farm boys. The total number of males engaged in farming in Minnesota in 1950 was 232,721 as compared to 159,035 in 1960, a 32 per cent decrease.

The largest percentage increase in the number of students making plans for their post-high school careers occurred among the men planning to enter military service. In 1950, after World War II and before the Korean War, only 6 per cent of the boys planned to enter military service the year following high school graduation whereas the percentage in 1961 was 18. The proportion of metropolitan boys with these plans increased slightly more than threefold; the proportion of non-farm boys increased less than threefold; and the proportion of farm boys increased fourfold.

Changes in the proportions of graduates planning post-high school education were large and significant but not as large as the changes in the proportions planning to enter military service or for those planning to obtain jobs. The proportion planning to attend college over the 11 year period increased on the average by one-half a percentage point per year and whereas 36 per cent planned to attend college in 1950, 41 per cent had such plans in 1961. The rate of increase here was slightly greater among the boys than among the girls, and among the boys the rate of increase was slightly greater among those from farms than for those from other areas. Insofar as the percentage of farm boys planning to attend college in 1950 was much lower than the percentage among boys from other area, the meaning of this comparison is ambiguous.

Differences found in 1950 among the three groups of male students persisted in 1961. Proportionately more metropolitan boys planned to attend college than did non-farm boys and in turn many more non-farm boys planned to attend college than did farm boys. The same area differences were found among the girls. In 1950 among the farm students more girls than boys planned to attend college, 20 per cent of the boys and 24 per cent of the girls. In 1961, however, the sex difference was reversed and more boys than girls planned to attend college, 28 per cent as compared to 25 per cent.

In summary, both in 1950 and in 1961 where a student lived and the sex of the student were related to his plan for higher education.

Significant increases occurred in the proportions of boys and girls planning to attend trade school. The increases were relatively small for the metropolitan and non-farm boys but larger for the farm boys. The increases were considerably larger for the girls, but in spite of these increases, only 4 per cent of the girls were planning to attend trade school.

The proportions planning to attend business school remained relatively constant for both sexes and in 1950, 5 per cent of the students were planning on such post-high school training; the percentage in 1961 was exactly the same.

The proportion of girls planning to enter nurses' training increased slightly from 1950 to 1961. In the earlier year, 6 per cent had such plans, as compared to 7 per cent 11 years later. Again it must be remarked that although the percentage increase was small, the number with such plans increased from approximately 800 to approximately 1600. With an increase of one percentage point in the proportion of girls planning to enter nurses' training, the actual number with such plans about doubled.

> In summary, the 11-year period was accompanied by marked changes in the plans made by high school graduates. Many fewer students in 1961 planned to obtain jobs; many fewer farm boys planned to work for their parents; many more boys planned to enter military service; a considerable increase was found in the proportion of students planning to enter college; and a significant increase was found in the proportion of students planning on other post-high school training programs. Sex and area differences observed in 1950 persisted in 1961 with a notable shift found among farm male and female graduates planning to attend college. In 1950 college was a more popular plan for farm girls; in 1961 this was a more popular plan among farm boys.

Characteristics of Seniors

In considering the post-high school plans of Minnesota seniors and the changes in the conditions related to these plans, it is useful to examine the entire population of high school seniors and note the changes which occurred between the classes over the 11 years.

Age

The 1961 high school graduates were more homogeneous in age than were their predecessors in 1950. Only 2 per cent of the 1961 students were 16 years of age, as compared with 7 per cent of the 1950 seniors. One per cent were 19 or older, as compared with 2.5 per cent in 1950. Most students--82 per cent--were 17, and 14 per cent were 18 years of age. Apparently significantly fewer students are either accelerated or held back during their school careers today as compared with a decade ago.

Father's Occupation

The following percentages of Minnesota's 1961 high school seniors reported their fathers to be in these types of occupations:

Professions	6
Owns or manages business	13
Office work	4
Sales	5
Owns or manages farm	20
Skilled trade	19
Factory worker	15
Other	9
Deceased or Disabled	3
Retired or pensioned	1
Unemployed	.4
No answer	3

In 1950 only 16 per cent were in skilled trades and 27 per cent were farmers. Otherwise there were no changes.

Social changes also are reflected by the descriptions of how the family obtains its income. The percentages reported by the 1961 seniors were as follows:

Professional fees or business profits (including profits from farms)	32
Fixed salary	23
Wages	36
Investments	1
Pensions	3

The proportion checking "Fees or business profits" showed a decrease of 8 per cent from 1950, while the percentage reporting wages increased by 5 percentage points. Since profits from farms are included in the fees-and-business-profits category, this may be the reason that this proportion has become smaller, and the move into the towns and cities has increased the proportion obtaining their income from hourly or daily wages.

Education of Parents

The parents of the 1961 seniors were significantly better educated than those of the 1950 seniors. Large differences occurred in the educational levels of both parents of students living in different residence areas. These changes in fathers' education are shown below:

Table 5-2

Percentage of 1950 and 1961 Boys with Fathers Having Specified Education

Amount of Education	Area Metropolitan '50	 '61	 Non-Farm '50	 '61	 Farm '50	 '61
Did not attend school	0	0	0	0	0	0
Some grade school	9	3	12	6	21	11
Completed eighth grade	24	16	33	31	50	55
Some high school	15	15	14	13	11	11
Graduated from high school	16	26	12	23	6	14
Business or trade school	11	10	10	7	6	4
Some college work (including teacher training)	6	9	4	6	2	2
College graduate	10	12	8	8	2	1
Holds more than one college degree	4	5	3	3	0	0
No answer	3	3	3	2	2	1

The changes which occured in the metropolitan area consisted of considerably more fathers having graduated from high school or having some high school training. The same trend occurred for the non-farm area, but the changes were smaller, while for the farm area the shifts which occurred were from less than an eighth-grade education to completion of the eighth grade, and from less than a high school education to high school graduation. For the 1961 groups, one-fifth from the metropolitan area, slightly over a third from the non-farm area, and approximately two-thirds from the farm area had fathers who had completed no more than an eighth-grade education.

Similar changes were found for the educational level of the mothers, although the actual levels of education achieved by these mothers were considerably different from those achieved by the fathers. The percentages of mothers who had some college education were similar to those reported for fathers. The mothers, however, were more likely to have continued their education only to the point of high school graduation than were the fathers. For example, 34 per cent of the 1961 seniors reported that the highest level of education achieved by their mothers was getting a high school diploma, as compared with 21 per cent for fathers. Thirty-nine per cent of the students reported their fathers had an eighth-grade education or less, as compared with 26 per cent of their mothers.

The proportions of boys and girls graduating from high school are now equal while the proportion of boys obtaining some college education is higher than that for the girls. A study undertaken of Minnesota high school seniors 20 to 25 years from now should show the proportion of mothers and fathers graduating from high school to be equal, and a higher proportion of fathers with some college education.

Finances

No differences in the adequacy of the family income were reported by the students over the 11-year period. For both 1950 and 1961 seniors, the data are reported in Table 5-3.

Table 5-3

Percentages of Total Group Describing Adequacy of Family Income in 1950 and 1961

Categories	1950	1961
Frequently have difficulty making ends meet	4	5
Sometimes have difficulty in getting the necessities	4	6
Have all the necessities but not many luxuries	24	24
Comfortable but not well-to-do	59	57
Well-to-do	7	7
Wealthy	.25	.20
No response	3	1
Total number	25040	44734

The two groups differed in the percentages of students who were not going to college who said they would change their plans and attend if they had more money. In 1950, 28 per cent said they would change their plans, as compared with 24 per cent in 1961. Reported lack of finances, then, appeared to be slightly less of a barrier to college attendance than previously. Of those who said they would attend college if they had more money, the amount that they reported needed to attend remained the same as compared with 1950. Twelve per cent said they would need enough for all of their college expenses, 12 per cent said they would need enough for half of their expenses, and 2 per cent said they would need enough for less than half.

Description of Home

The seniors of both years were asked about various appliances and conveniences in their homes. In 1950 these items significantly differentiated between students who were and were not planning to go to college. By 1961 appliances and conveniences were found in most homes and were not related to college plans.

The same proportion, 80 per cent, reported that their families owned their own home in 1950 as in 1961. In 1950, 79 per cent reported that their homes had central heating, and this proportion increased to 90 per cent in 1961. The largest increase was found among the farm students, where the percentages reporting central heating increased from 62 to 78 per cent. Ninety-four per cent of the seniors reported running water in their homes, as compared with 81 per cent in 1950. Again the largest increase occurred among students from the farm, where the increase was from 50 per cent to 83 per cent. In 1950, 40 per cent of the students from the farm reported their homes had both hot and cold running water, and this percentage increased to 77 per cent in 1961. In 1950, 84 per cent of the seniors said that their homes had electric or gas refrigerators, but this appliance was found in only 74 per cent of the farm homes. In 1961 an electric or gar refrigerator was found in the homes of over 99 per cent of the students from all residence areas.

Ninety-three per cent of the students reported a telephone in their home in 1961, as compared with 85 per cent in 1950. Again the largest increase occurred in the farm homes, where the percentage rose from 70 per cent to 85 per cent. In 1950, 45 per cent of the students reported that their family owned or rented a deep freeze unit or locker. In 1961 this proportion had risen to 66 per cent. The largest increase occurred in the metropolitan homes where the proportion rose from about a quarter of the homes in 1950 to about half of them in 1961. A deep freeze was available to 91 per cent of the families of students from the farms. In 1950, 10 per cent of the homes of students from the farms were without electric lights, and this percentage decreased to less than 1 per cent in 1961.

> In 1950, television was found in only 6 per cent of the homes of the graduating seniors. By 1961 only 6 per cent were without television sets. Television sets are now found in 99 per cent of the homes of the metropolitan students, 95 per cent of the nonfarm students, and 89 per cent of the farm students.

> Some families in metropolitan areas do not have television, but only rarely are they families with teenagers.

Size of Home

The 1950 and 1961 graduating seniors were similar in the number of persons they reported living in their homes. The 1961 seniors, however, reported that their homes were slightly larger than did those of 1950. The percentages reporting various numbers of people living in their homes are as follows:

No. of People	Percentage
2	2
3	17
4	25
5	21
6	14
7	8
8	5
9	3
10	2
11 or more	2

Slightly larger percentages of 1961 students reported their homes contained 9, 10, and 11 or more rooms than did those of 1950, and slightly fewer 1961 seniors reported coming from homes containing less than five rooms. A slightly larger proportion of the 1961 seniors, 53 per cent, had a bedroom to themselves, as compared with the 49 per cent in 1950.

Books and Magazines in the Home

> Although the numbers of appliances and TV sets in the homes of the seniors increased dramatically over the past decade, the number of books and magazines reported remained substantially the same.

The number of books increased slightly, with only about a fifth of the seniors reporting less than 25 books in their home as compared with 28 percent in 1950, while the proportion reporting over one hundred books increased from 23 per cent to 27 per cent. The proportion reporting the Reader's Digest in their homes remained the same, 53 per cent. Life decreased from 32 per cent to 29 per cent, while the Saturday Evening Post and Look both increased from 22 per cent to 28 per cent. Time remained the same at 15 per cent, while Newsweek increased from 9 to 13 per cent. The proportion reporting the Atlantic Monthly decreased from 4 per cent to 2 per cent, while the figure for Harper's remained the same, 2 per cent. The reading habits of the families of high school seniors as implied by these figures have not changed much over the past decade.

Parents' Organizations

The proportions of students reporting their parents belonged to various organizations remained similar over the 11-year period with a few impressive exceptions. The proportion reporting their parents belonged to the PTA increased from 39 per cent to 49 per cent. Those reporting their parents belonged to a labor union increased from 17 per cent to 22 per cent, while those reporting their mothers belonged to the Ladies' Aid decreased from 36 per cent to 27 per cent. Organizations which remained substantially the same included American Legion or VFW, 12 per cent; Knights of Columbus, 8 per cent; Masons, 7 per cent; Eastern Star, 4 per cent; Chamber of Commerce, 6 per cent; and sportsmen's clubs, 9 per cent.

High School Background

In 1961, 39 per cent of the graduates said they took a college-preparatory course in high school. This was an increase of 8 percentage points from the 31 per cent reporting this curriculum in 1950. This difference matched the 8 per cent fewer students who reported they took a general course in high school; 30 per cent reported this curriculum in 1961 as compared with 38 per cent in 1950. Other types of courses remained the same over the 11-year period: 7 per cent in a technical curriculum, 18 per cent in a commercial curriculum, and 3 per cent in an agricultural curriculum.

The students were asked to check the reasons that they took the high school curriculum that they did, and examination of these reasons explains some of the change which occurred. More students went to college in 1961 than in 1950--41 per cent as compared with 36 per cent. More variety of curricula is offered in the high schools in 1961. In 1950, 9 per cent of the graduates checked the reason, "it was the only one offered," while in 1961 this proportion dropped to 4 per cent. In 1961, 14 per cent of the graduates checked "advice of counselor" as an important reason why they took the curriculum they did, as compared with only 6 per cent in 1950. Fifty-one per cent of the 1961 graduates checked that the course fitted their vocational plans the best, as compared with 44 per cent in 1950, and 21 per cent checked "parent's advice" as an important reason, a significant increase over the 14 per cent checking this reason in 1950. Other percentages which showed no change over the last decade included:

Teacher's advice	6
Required by school	8
Seemed easiest	4
Was best in this type of course	17
Found it the most interesting	33

> Seventeen per cent of students not planning to attend college the year following graduation said they were planning to attend at a later date. Seven per cent planned to attend after one year, 4 per cent after two years, 3 per cent after three years, and 3 per cent after four or more years. It is difficult to estimate just what proportion of these students will actually carry out these plans, but if only half of them do, the total proportion of the graduating seniors who attend college will fall somewhere between 45 and 50 per cent.

Influence of Marriage

The 1961 graduates were asked if marriage or the early prospect of marriage influenced their plans for the coming year. Only 11 per cent of them--6 per cent of the boys and 17 per cent of the girls--answered in the affirmative. They were also asked if they had any idea when they planned to get married. One-third of 1 per cent of each of the sexes reported that they were already married, and 4 per cent of the girls and .5 per cent of the boys indicated plans for marriage shortly after graduation. Another 5 per cent of the girls and 1 per cent of the boys stated they they planned to be married the second year after graduation from high school. Ninety per cent of the girls and 98 per cent of the boys either had no plans at all for marriage or else were not planning to be married for at least several years. Marriage, then, is not an important determinant of post-high school plans for the vast majority of Minnesota's high school graduates. These results are consistent with several other data which have shown that the trend toward early marriage in the United States has not been felt in Minnesota to the extent that it has in other areas.

Chapter 6

RELATIONSHIP OF ABILITY TO COLLEGE ATTENDANCE

The previous chapter reported that the numbers as well as the proportion of high school graduates entering college have increased significantly over the past decade. Many persons interested in higher education have become alarmed about these large increases. They fear that many more students of lower ability must be included now that "everybody" is attending college. This, they assert, naturally results in a watered-down, less vigorous, and less intellectual experience for the more talented students who formerly presumably had the campus to themselves.

If from the study of the achievement and aptitude records of high school seniors we find that proportions of lower ability students have shown a greater increase in college attendance than those of higher ability students, then these worries could have some validity. If, on the other hand, proportions at all levels of ability have increased equally or if, conversely, proportions of high ability students show a greater increase than those with less ability, then these fears, at least as they are concerned with the past decade, would be groundless.

Information about the ability and high school achievement of seniors was available from the State-Wide Testing Program sponsored by the Association of Minnesota Colleges and administered by the Student Counseling Bureau of the University of Minnesota. As a part of this program all of the juniors in all of the public and private high schools in the state take a scholastic aptitude test in January of their junior year. In the past, the test administered was the American Council of Education Psychological Examination (ACE); since 1958 the Minnesota Scholastic Aptitude Test (MSAT), a condensed version of the Ohio Psychological Test, has been used. Each high school in the state also reports to the Student Counseling Bureau the rank in class of each of the juniors in that high school as of the end of the junior year. The Student Counseling Bureau then computes the percentile rank in high school class and the percentile score for the MSAT and reports these data for each student to the high school and to all of the colleges in the association. Of the 44,756 students who completed the questionnaire in this study, information regarding scholastic aptitude and high school achievement was available for 42,078. Those on whom information was not available were students who had moved at some time during the end of their junior or first half of their senior year, or who, for one reason or another, missed the junior year testing.

Minnesota Scholastic Aptitude Test Scores

The means and standard deviations of MSAT scores obtained by the students in the study are shown in Table 6-1. The mean for metropolitan students is higher than that for non-farm students and this mean is higher than that for the farm students. In each case women obtained higher means than those of the men. Each of these differences is statistically significant at beyond the .001 probability level, although with the exception of lower mean scores among farm groups, the differences are not large enough to have practical significance.

Table 6-1

A Comparison of Mean MSAT Scores by Sex and Residence Areas

Area	Male			Female		
	Mean	Standard Deviation	N	Mean	Standard Deviation	N
Metropolitan	32.86	14.67	7681	33.73	14.37	7604
Non-Farm	30.73	13.53	7519	32.56	13.96	7961
Farm	26.62	14.17	5656	29.16	12.40	5721

The range of MSAT scores was divided into deciles for students in this study and those within each of these deciles were compared according to post-high school plan. The results are shown in Table 6-2 for the males and Table 6-3 for the females. In examining the results in these tables the information regarding differences in ability among the various residence areas as shown in Table 6-1 should be kept in mind. For example, an MSAT raw score equal to a percentile score of 90 among the farm males would be equal to a percentile score of 80 for the non-farm and of 75 for the metropolitan males.

> The tables show post-high school plans are closely related to college aptitude test scores. Eighty per cent of the students in the top decile planned to attend college as compared to 10 per cent in the bottom decile. Only 6 per cent in the top decile planned to seek jobs immediately as compared with 38 per cent in the bottom decile.

Between sexes and among geographic areas many interesting differences occur in this relationship between aptitude and plan. Among the males in the top decile, about 90 per cent from metropolitan and non-farm

Table 6-2

Comparison of Percentages of Males According to Area, Plan, and MSAT Decile

MSAT Decile (approximate)	Metropolitan						Non-Farm						Farm					
	Job	Col	Trd	Bus	Mil	N	Job	Col	Trd	Bus	Mil	N	Job	Col	Trd	Bus	Mil	N
91 - 100	1	94	0	0	2	761	3	89	1	0	4	752	7	75	2	1	7	579
81 - 90	5	84	2	0	7	802	5	79	2	1	10	809	12	53	6	2	13	640
71 - 80	6	77	2	1	9	700	8	69	4	1	13	809	18	37	8	2	18	538
61 - 70	7	69	4	1	12	824	10	56	8	0	17	719	18	30	10	2	19	621
51 - 60	10	62	8	1	13	684	15	48	9	3	20	796	22	23	11	1	22	544
41 - 50	11	51	9	2	18	829	17	42	10	3	21	681	22	17	11	4	25	701
31 - 40	15	40	11	2	22	692	16	35	8	2	25	754	23	12	10	4	25	499
21 - 30	19	35	10	2	22	665	25	26	10	3	26	725	27	10	9	1	23	471
11 - 20	21	26	14	2	28	868	28	18	12	4	29	716	30	7	10	1	21	621
1 - 10	22	18	17	2	28	856	27	11	15	2	32	758	31	5	11	1	25	442
Total						7681						7519						5656

Table 6-3

Comparison of Percentages of Females According to Area, Plan, and MSAT Decile

MSAT Decile (approximate)	Metropolitan						Non-Farm						Farm					
	Job	Col	Trd	Bus	Nur	N	Job	Col	Trd	Bus	Nur	N	Job	Col	Trd	Bus	Nur	N
91 - 100	5	80	0	1	2	732	8	79	0	3	6	835	17	60	1	5	10	625
81 - 90	12	74	0	2	6	791	14	66	1	4	10	786	24	47	3	7	11	599
71 - 80	18	65	2	4	5	749	20	53	3	6	10	803	32	34	3	9	12	552
61 - 70	22	59	2	4	8	783	23	45	3	8	11	879	38	25	4	10	13	542
51 - 60	27	48	4	5	6	758	28	38	5	8	9	846	40	21	7	12	6	544
41 - 50	36	38	3	6	6	752	31	29	7	9	10	891	43	20	6	13	6	598
31 - 40	38	31	4	8	6	858	37	24	6	10	8	707	48	14	6	12	6	617
21 - 30	39	28	5	9	5	642	42	16	9	11	7	745	47	11	9	9	7	433
11 - 20	46	19	6	10	4	824	45	13	9	9	7	828	56	8	5	8	4	619
1 - 10	49	12	6	10	4	715	47	8	8	10	5	641	56	4	8	9	5	592
Total						7604						7961						5721

areas planned on college as compared with only 75 per cent from the farm. Among the females this difference is 80 per cent as compared with 60 per cent of the farm girls. These same differences appear throughout the range of aptitude so that even in the lowest decile 18 per cent of the metropolitan males are planning on college as compared with 5 per cent of the farm males. In each decile, the percentage of males attending college is higher than that for females with a slight exception occurring in the lower deciles of the farm groups. For all students, the proportion in each decile planning to seek employment increases as aptitude test scores decrease. Among the males planning to enter the military service a similar but reversed relationship to test scores is found.

A slightly smaller proportion of women in the top decile planned to enter nursing as compared with the next two or three deciles. Below the middle decile the number entering nursing tends to decrease as scores decrease. Among girls from the farm and non-farm areas, considerably higher proportions entering nursing were in the upper deciles as compared with the metropolitan group.

The trend among girls entering business school differs between metropolitan and non-metropolitan groups. In the non-metropolitan groups proportionately more business-school plans are found in the middle deciles as compared with the upper and lower deciles. In the metropolitan group, however, the frequency of those entering business school increases as the aptitude scores decrease.

Among the considerably fewer males entering business school, the trend among those from the metropolitan and non-farm areas is similar to that of metropolitan girls--increasing numbers as the deciles fall. The highest frequencies of farm males entering business school are found in the middle deciles.

Male students planning on trade school increase in numbers as scholastic aptitude scores decrease. A higher proportion of farm males in the upper deciles enter trade school as compared with the other two male groups. A larger proportion of higher ability males from the farm also enter the military service, as compared to the other two groups.

High School Percentile Rank

The mean high school percentile ranks are shown for each of the groups in Table 6-4. The mean achievement ranks of the girls are considerably above those of the boys. This difference is consistent with most other studies of school achievement. The mean for the total group slightly exceeds 50 because of the method used to compute the percentile ranks and perhaps because of selective attrition which may take place after the end of the junior year. The large difference found among the residence areas for the men are not present for the women. The differences between sexes in high school percentile ranks are greater for the farm students and smallest for the metropolitan students.

Table 6-4

A Comparison of Mean High School Percentile Ranks by Sex and Residence Area

Area	Male			Female		
	Mean Percentile Rank	Standard Deviation (approximate)	N	Mean Percentile Rank	Standard Deviation (approximate)	N
Metropolitan	47.67	28.8	7839	57.38	27.6	7649
Non-Farm	44.69	28.8	7557	58.27	27.6	7851
Farm	42.30	28.8	5707	57.39	27.5	5745

Post-high school plans by decile of high school rank are shown in Tables 6-5 and 6-6. When the figures in these tables are compared with those of the preceeding ones dealing with aptitude test scores, the relationships between these two variables and post-high school plans are found to be similar.

Approximately 90 per cent of the top decile males from all areas attend college. The lower percentage going to college in the top decile of the farm group on MSAT scores does not appear for high school rank. Farm boys are less likely than those in other areas to make the top decile of their class. If they do , however, they go to college in almost as large proportions as their counterparts from the towns and cities. About 75 per cent of the females in this top group go to college except those from the farm where the proportion drops to 60 per cent.

In the next-to-the-top decile, the proportion going to college remains about 85 per cent for the metropolitan and non-farm males but drops substantially in other groups, ranging from 69 per cent of the farm males down to 39 per cent of the farm females. These figures indicate that with the exception of the farm females, most of the students whose high school achievement places them in the upper decile of their graduating class are attending college.

> If it is assumed that most of the students in the decile next to the top also have the ability to profit from further education, then it becomes apparent that at this level we are losing many able students--among females in all areas and among males from the farm.

The proportion of students seeking jobs increases as the high school rank descends and this trend is similar to that found for aptitude scores. The proportion of farm boys planning to work for their parents

Table 6-5

Comparison of Percentages of Males According to Area, Plan, and High School Percentile Rank

High School Percentile Ranks	Metropolitan						Non-Farm						Farm					
	Job	Col	Trd	Bus	Mil	N	Job	Col	Trd	Bus	Mil	N	Job	Col	Trd	Bus	Mil	N
91 - 100	1	95	1	0	2	657	1	93	0	0	3	548	5	88	1	1	2	259
81 - 90	4	85	2	0	5	663	3	87	1	0	4	539	9	69	2	2	7	373
71 - 80	5	80	4	0	6	703	6	78	4	0	8	618	10	54	4	1	12	429
61 - 70	10	69	5	1	10	705	8	72	5	1	9	642	11	45	6	2	15	522
51 - 60	10	60	6	1	15	808	11	57	7	3	15	726	14	35	10	3	20	561
41 - 50	11	55	9	2	15	802	16	46	10	2	20	811	20	24	10	2	20	639
31 - 40	10	44	12	2	22	878	20	38	10	3	21	854	24	17	12	3	20	669
21 - 30	17	38	12	2	23	954	20	27	12	4	29	897	27	12	11	2	26	743
11 - 20	21	26	13	2	26	890	25	18	12	2	32	961	27	7	11	2	27	758
1 - 10	24	19	12	3	31	779	28	11	12	2	35	961	33	3	10	1	25	754
Total						7839						7557						5707

Table 6-6

Comparison of Percentages of Females According to Area, Plan, and High School Percentile Rank

High School Percentile Ranks	Metropolitan						Non-Farm						Farm					
	Job	Col	Trd	Bus	Nur	N	Job	Col	Trd	Bus	Nur	N	Job	Col	Trd	Bus	Nur	N
91 - 100	10	79	1	2	5	975	10	75	0	4	7	1054	16	59	1	8	11	693
81 - 90	19	67	1	3	5	968	20	57	2	5	10	1066	27	39	3	9	12	792
71 - 80	24	57	1	5	5	952	20	50	4	8	10	1014	33	36	3	7	9	677
61 - 70	30	47	2	7	7	899	27	38	5	10	9	888	42	22	6	8	10	705
51 - 60	35	40	3	6	6	850	31	31	7	9	9	818	42	19	5	13	7	624
41 - 50	33	38	4	6	6	731	37	25	6	10	8	776	46	13	6	12	6	560
31 - 40	38	26	5	9	6	693	37	21	9	9	8	664	54	7	8	10	5	497
21 - 30	40	22	6	8	6	643	41	13	9	8	7	618	54	7	7	9	5	447
11 - 20	42	20	7	8	6	523	44	10	9	10	7	523	57	4	10	6	5	425
1 - 10	48	15	8	9	3	415	53	3	10	7	4	430	59	4	6	6	2	325
Total						7649						7851						5745

increases rapidly as we go down the top deciles but stays fairly constant in the lower half of the distribution.

The relationship of high school rank to plans for attending trade school is also similar to that found with aptitude test scores. The proportion increases as the high school rank gets lower among the metropolitan and non-farm groups but among farm males the largest proportion is in the middle deciles with the percentages dropping off below that level.

The high school ranks of women entering nursing show an interesting trend. Among the farm women the largest proportion of girls entering nursing is found in the top decile. Among non-farm women the proportions are highest in the next-to-the-top deciles and among metropolitan women the proportions are highest in the middle deciles. The MSAT scores also showed a somewhat similar trend.

The achievement records of women planning to attend business schools also show a similar trend to that found for aptitude test scores. Higher proportions of these girls are found in the middle deciles from the farm and non-farm groups while higher proportions are found in the lower deciles for the metropolitan group. Here again business school seems to attract brighter girls from the farm and out-state areas than it does from the urban and suburban areas. Among the few girls planning on marriage immediately upon graduation there is a stronger negative relationship with high school rank than was found for MSAT scores.

High-Ability Students

The figures given in Tables 6-2 and 6-3 show clearly that the plans of high-ability students vary greatly from the remainder of the graduating class. The 1950 study gave considerable attention to such a group of able students. The ACE (1947 form) was the college aptitude test used at that time, and all students obtaining scores exceeding 120 were included in that high-ability group. A raw score of 120 on that test placed the student in approximately the upper 15 to 20 per cent of his high school class, and in the upper 25 per cent of Minnesota college freshmen as far as college aptitude is concerned. In the 1950 study, 18 per cent of the students on whom scores were available had scores of 120 or higher. A comparable group was obtained for the 1961 class by use of the MSAT raw score of 45. Seventeen per cent of the students on whom scores were available equalled or exceeded that score.

The plans of this group of talented young people of each of the survey years are compared in Table 6-7. Eighty-one per cent of these students planned to attend college in 1961 as compared with 67 per cent in 1950. A 5 percentage point increase in college attendance was found for the total 1961 graduating class over that of 1950.

This able group, then, with a 14 percentage point difference, has shown an increase in college attendance of almost three times that for the total group. The data indicate

Table 6-7

Comparison of 1950 and 1961 Percentage Distribution of High-Ability Students According to Sex, Plan, and Area

Plan	Male								Female								Male & Female							
	Metro		Non-Farm		Farm		Total		Metro		Non-Farm		Farm		Total		Metro		Non-Farm		Farm		Total	
	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61	50	61
Get a job	13	3	15	3	22	7	15	4	19	10	18	11	28	18	21	12	16	7	16	8	25	14	18	8
Go to college	81	90	73	88	61	82	74	88	70	81	63	75	48	61	62	75	75	85	68	81	53	69	67	81
Go to other school	4	2	7	3	11	3	6	2	7	4	10	6	13	10	10	6	5	3	9	4	12	8	8	4
Nursing	--	--	--	--	--	--	--	--	5	5	8	8	12	10	8	7	2	2	4	5	7	7	4	4
Military service	2	5	5	6	6	8	4	6	--	--	--	--	--	--	--	--	1	3	3	3	2	3	2	3
Total 1950	100		100		100		99		101		99		101		101		99		100		99		99	
1961		100		100		100		100		100		100		99		100		100		101		101		100
N 1950	724		867		315		1906		691		873		469		2033		1415		1740		784		3939	
1961		1647		1225		441		3313		1693		1598		747		4038		3340		2823		1188		7351

> that the increased emphasis on the value of a college education which has occurred over the past decade has had selective results as far as the ability of students who choose to attend college is concerned. It has not had the effect of encouraging equally all students at all levels of ability to attend college as has often been inferred.

Among the metropolitan and non-farm high-ability males, approximately 90 per cent are planning to attend college and 2 per cent to attend other types of schools. Of the 8 per cent seeking jobs or entering the military service, approximately one-half of them intend to go to college at a later date. Thus, over 95 per cent of this group are planning on a college education.

To further examine the plans of the top students, they were observed in yet another way. A sample was drawn which included all students who placed in the top decile on both MSAT and high school rank. There were 1,908 such students representing the top 4.5 per cent of the graduating seniors. The plans of this group are shown in Table 6-8. Ninety-five per cent of the males and 83 per cent of the females planned to attend college. Among the metropolitan men, the proportion of students planning to go directly on to college was particularly high--97 per cent. Of the 312 boys in this group, 304 were planning to attend college in the fall. When the percentages of girls entering nursing are added to those planning on college, the totals approach those for the men except among the farm women, where a number of extremely able girls were not going to college.

Studies summarized by Wolfbein (1959) indicate that in many areas in the country the number of high-ability students dropping out of high school before graduation has reached negligible proportions. This study now presents evidence that the number not continuing their education beyond high school has also diminished to a relatively small percentage. Studies such as those by Iffert (1958) and Thistlethwaite (no date) have shown a high rate of attrition exists at most colleges in the country, even among relatively able students. These results suggest that emphasis on holding our young people in educational institutions until they have been trained to make the fullest use of their high potential should now be directed at the collegiate level.

These results also reveal that considerable progress needs to be made to encourage high ability girls from all areas and high-ability males from rural areas (and undoubtedly males from urban slum areas not present to any large degree in Minnesota) to continue their education beyond the high school level.

Table 6-8

Post-High School Plans of Students in Top Decile on Both High School Rank and MSAT

(Top 4.5 Per Cent of Population)

Plan	Male				Female				Male and Female
	Metro	Non-Farm	Farm	Total	Metro	Non-Farm	Farm	Total	Total
	%	%	%	%	%	%	%	%	%
Get a job	0	1	2	1	4	6	11	7	4
Go to college	97	94	94	95	89	84	72	83	88
Go to other school	1	1	0	1	2	4	7	3	2
Enter military service	1	3	2	2	--	--	--	--	1
Enter nurse's training	--	--	--	--	3	4	8	5	3
Other	1	2	2	1	2	2	2	2	2
Total	100	101	100	100	100	100	100	100	100
N	312	308	168	788	393	437	290	1120	1908

References

Iffert, R. E. Retention and Withdrawal of College Students. U.S. Office of Educ Bulletin, 1958, No. 1.

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Wolfbein, S. L. Transition from school to work: A study of the school leaver. Personnel and Guidance Journal, 1959, 38, 98-105.

Chapter 7

THE RELATIONSHIP OF SOCIO-ECONOMIC VARIABLES AND ABILITY TO COLLEGE ATTENDANCE

One method of examining the relationships between social and psychological variables and college attendance is to compute correlation coefficients between these variables and post-high school plans. Since similar data were available for both 1950 and 1961 students, correlations could be computed in order to study changes in relationships which occurred over the intervening 11 years. In this way a number of questions could be answered: Has ability become more or less important as a determinant of college attendance? Have socio-economic variables become more or less important? Has income alone become a more or less important determinant? How have changes in the relationship with socio-economic status compared with similar changes with ability and achievement?

The total sample of seniors was divided according to sex and residence area. From these groups, random samples were selected consisting of students who planned to attend college and to obtain jobs, and for whom complete socio-economic and ability data were available. Each of the socio-economic and ability variables was correlated with the dichotomous variable of college attendance-employment. Students with all other plans were excluded from this analysis.

Pearson product-moment correlations were used because this was the only technique available in a computer program for multiple correlations. Although certain of the assumptions regarding correlation coefficients may not hold for situations where one of the variables is dichotomous, it is still useful to compare results when all have been calculated by the same method.

In computing correlations, the variable "planning to attend college" was assigned the highest integer. Therefore, considering the relationship between father's education and plan, a positive correlation indicated that the higher the level of father's education, the more likely the student was to attend college. The variables also were combined in regression equations and a number of multiple correlation coefficients were obtained.

For samples of the size used in this analysis, correlation coefficients can be considered to be statistically significant at the .05 probability level when they are above .10 and significant at the .01 level above .15.

Father's Occupation

Students checked the category in which the occupation of their father fell, and these categories were ranked from number 1, profession, through number 7, factory worker or laborer. Students who indicated their fathers were in occupations which could not be classified easily in the seven categories on the questionnaire were not included in the analysis. Because the professional occupations were given the rank of 1 and the laborers the rank of 7, the resulting correlations with college attendance were negative. The correlations between father's occupation and college attendance are shown for each of the residence groups in Table 7-1. Since most students living on farms had fathers who were farmers, significant correlations were not found on this variable among the farm students. Correlations for the other two area groups tended to be in the vicinity of .35, and changed significantly over the 11-year period only among the metropolitan males. Here the relationship of college attendance to father's occupation significantly decreased. The correlations also decreased for the metropolitan females, but not enough to be statistically significant. Correlations among the non-farm groups remained similar for the survey years.

Table 7-1

Comparison of Coefficients of Correlation Between Father's Occupational Level and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	-.49	290	-.30**	397	-.43	345	-.33	425
Non-Farm	-.32	279	-.34	399	-.39	300	-.36	440
Farm	-.09	204	-.07	213	-.01	322	-.11	308

** Correlations for 1950 and 1961 differ significantly at .01 level

Family Income

Students in both survey years were asked to check a phrase on the questionnaire which best described their family income. The six categories ranged from "frequently have difficulty making ends meet" through "Comfortable but not well-to-do" to "wealthy." The relationship of reported adequacy of income with plans to attend college are shown for each of the residence groups in Table 7-2. Again, no relationship was found among the farm groups, but among the other groups it tended to be in the vicinity of .25. This relationship did not change significantly between the two survey years except among the metropolitan females, and the authors offer no explanation for the large drop which occurred in the relationship for this group. The low relationship found for the 1961 metropolitan females was checked for another sample of these girls and low correlation was found again in the second sample.

Table 7-2

Comparison of Coefficients of Correlation Between Reported Adequacy of Family Income and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.27	290	.24	397	.34	345	-.02***	425
Non-Farm	.20	279	.24	399	.25	300	.24	440
Farm	.09	204	.11	213	.05	322	.07	308

*** Correlations for 1950 and 1961 differ significantly at .001 level.

Parental Education

The students checked the highest educational level for each of their parents on a nine-point scale, ranging from "did not attend school" through "some high school" up to "holds more than one college degree." The correlations for each of the groups between the educational level of the father and whether or not the student planned to attend college are shown in Table 7-3. The correlations were generally in the vicinity of .40, except among farm students where the relationship was smaller. The relationship of father's education to college attendance dropped substantially among the metropolitan males. Similar correlations are shown for the educational level attained by the mother in Table 7-4. These relationships are similar to those found for father's education, and again are substantially lower among farm students. Again the relationship is similar for both survey years, except the correlation found for

Table 7-3

Comparison of Coefficients of Correlation Between Father's Educational Level and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation.	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.43	290	.15***	397	.44	345	.46	425
Non-Farm	.35	279	.50*	399	.32	300	.43	440
Farm	.12	204	.17	213	.22	322	.23	308

*** Correlations for 1950 and 1961 differ significantly at .001 level.
* Correlations for 1950 and 1961 differ significantly at .05 level.

Table 7-4

Comparison of Coefficients of Correlation Between Mother's Educational Level and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.35	290	.17*	397	.39	345	.30	425
Non-Farm	.40	279	.32	399	.45	300	.50	440
Farm	.05	204	.20	213	.26	322	.34	308

* Correlations for 1950 and 1961 differ significantly at .05 level.

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the 1961 metropolitan males is significantly lower than that found for the same group in 1950. A tendency is shown in the 1961 correlations for the educational level of each parent to be more highly related to college attendance for women than for men. Within each group the relationship of the educational level of each parent to college attendance is quite similar. Previous studies have shown the educational level of the mother to be a more important factor than that of the father in determining whether or not the student goes to college. These figures do not support that finding, but suggest that the educational level of each of the parents is equally important.

Number of Books in Home

Correlations between the number of books the students reported in their homes and college attendance are shown for the 1961 samples in Table 7-5. Similar correlations for the 1950 study were not readily available. The number of books in the home showed a higher relationship to college attendance than did reported adequacy of income. The relationship was higher for both sexes and significantly so among the girls.

Table 7-5

Comparison of Coefficients of Correlation Between Reported Number of Books in the Home and College Plans for the 1961 Seniors

Area	Male		Female	
	1961		1961	
	Correlation	N	Correlation	N
Metropolitan	.25	397	.32	425
Non-Farm	.24	399	.35	440
Farm	.17	213	.27	308

A Combination of Socio-Economic Variables

Each of the socio-economic variables--parental occupational and educational levels and reported adequacy of income--were combined in single regression equations. The multiple correlation coefficients for these equation are shown for each sex and residence group in Table 7-6.

Table 7-6

Comparison of Multiple Correlation Coefficients Between Four Socio-Economic Variables and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.54	290	.39**	397	.56	345	.52	425
Non-Farm	.45	279	.55	399	.51	300	.56	440
Farm	.15	204	.26	213	.31	322	.40	308

** Correlations for 1950 and 1961 differ significantly at .01 level.

Among the metropolitan and non-farm students, the multiple correlations are in the vicinity of .50. They are somewhat lower among the farm students, particularly among the farm males. The relationship of these variables to college attendance did not change significantly over the past 11 years except among the metropolitan men, where the relationship in 1961 was significantly lower.

> The state university and other colleges are more easily accessible to metropolitan students and among the large number of metropolitan men now attending college socio-economic variables have become less important determinants of college attendance.

Relationship of Ability Measures

The relationship of scores on scholastic aptitude tests with college attendance also was observed for groups of both survey years. In 1950 the ACE taken in the senior year was the test used, and in 1961 the MSAT taken in the junior year was used. The correlation coefficients between these test scores and whether the student planned to attend college or get a job are shown for each of the six groups in Table 7-7.

The relationship of test scores to college attendance increased significantly among the girls and among the farm males between 1950 and 1961. Ability, then, appeared to be a more important factor in college attendance in 1961 for these groups than in 1950.

Table 7-7

Comparison of Coefficients of Correlation Between Scholastic Aptitude Test Scores and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950 (ACE)		1961 (MSAT)		1950 (ACE)		1961 (MSAT)	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.44	290	.32	397	.30	345	.43*	425
Non-Farm	.38	279	.39	399	.45	300	.59*	440
Farm	.29	204	.52**	213	.30	322	.47*	308

* Correlations for 1950 and 1961 differ significantly at .05 level.
** Correlations for 1950 and 1961 differ significantly at .01 level.

High School Rank

The relationship of school achievement as measured by high school percentile rank with college attendance is shown in Table 7-8. A significant increase in the relationship between high school rank and college attendance was found for the farm students of both sexes. The correlations between high school rank and college attendance were similar to that found between scholastic aptitude test score and college attendance. Furthermore, the changes which occurred between 1950 and 1961 were also similar for farm students. The relationship between high school rank and scholastic aptitude test scores was in the order of .60.

When high school percentile rank and scholastic aptitude test scores were combined in a regression equation to yield multiple correlation coefficients with college attendance, the results were as shown in Table 7-9. These regression coefficients are only slightly higher than those obtained from either of the variables alone.

Table 7-8

Comparison of Coefficients of Correlation Between High School Percentile Rank and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.33	290	.30	397	.30	345	.39	425
Non-Farm	.40	279	.38	399	.47	300	.57	440
Farm	.44	204	.62*	213	.33	322	.53**	308

* Correlations for 1950 and 1961 differ significantly at .05 level.
** Correlations for 1950 and 1961 differ significantly at .01 level.

Table 7-9

Comparison of Multiple Correlation Coefficients Between High School Percentile Rank—Scholastic Aptitude Test Score and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.46	290	.35	397	.34	345	.45	425
Non-Farm	.43	279	.42	399	.50	300	.62	440
Farm	.44	204	.63	213	.35	322	.55	308

> Ability and achievement during the 11 years became more important in determining whether or not girls from all areas and boys from the farm attended college. The importance of socio-economic factors remained constant for certain groups and for others significantly decreased during this period. These changes are undoubtedly due to the fact that more of the able students now have the opportunity to attend college. That ability and achievement factors are becoming increasingly more important than socio-economic background as a determinant of college attendance is an encouraging trend in a democratic society.

When all seven variables--high school percentile rank, scholastic aptitude test scores, and the four socio-economic variables--are combined in one regression equation, the coefficients which result for each of the six groups are shown in Table 7-10. With the exception of the metropolitan males, where the ability to predict college attendance from these factors has shown a significant decrease, college attendance can be predicted for the other 1961 groups at the .60 level. The significantly higher coefficients shown for the 1961 groups demonstrate the increased variance accounted for by the aptitude and achievement factors.

Table 7-10

Comparison of Multiple Correlation Coefficients Between Six Achievement--Aptitude--Socio-Economic Variables and College Plans for the 1950 and 1961 Seniors

Area	Male				Female			
	1950		1961		1950		1961	
	Correlation	N	Correlation	N	Correlation	N	Correlation	N
Metropolitan	.63	290	.46**	397	.60	345	.56	425
Non-Farm	.52	279	.63*	399	.61	300	.71*	440
Farm	.46	204	.64**	213	.44	322	.59**	308

* Correlations for 1950 and 1961 differ significantly at .05 level.
** Correlations for 1950 and 1961 differ significantly at .01 level.

The meaning of these multiple correlations is clarified when one recalls that a correlation coefficient of .60 essentially accounts for 36 per cent of the variance which explains the variability of the condition being predicted. Thus, if one can conceive of post-high school plans resulting from a multitude of conditions and situations, approximately one-third of the conditions and situations are measured by these indices of ability, socio-economic status, and high school percentile rank.

This means that approximately two-thirds of the variance is accounted for by other conditions. Among the other conditions most evident are sex and area. Another characteristic demonstrated in this report to be related to plans is the attitudes, values, and personalities of students.

Even if socio-economic factors had no effect on whether or not a student planned to attend college, these variables would still show a significant correlation with plans because of the relationship between ability and such socio-economic factors as parental educational and occupational levels. The relationships of each of the socio-economic variables to scholastic aptitude test scores and high school rank are shown for each of the groups in Table 7-11 and 7-12.

Father's occupational level, father's educational level, and mother's educational level all correlated with scholastic aptitude test scores at about the same level--between .20 and .30--among the metropolitan and non-farm groups of both sexes. Smaller relationships--between .10 and .20--were found among the farm groups. Adequacy of family income was only slightly related (.10) to test scores, and showed no relationship among farm students. Number of books in the home showed a relationship with test scores at the .20 level for the male students and at the .30 level for the female groups.

The relationship between parental occupational and educational level and high school ranks was similar to that found for test scores among the non-farm (.20) and farm (.10) students. The relationships among the metropolitan students were in the vicinity of .10 while for test scores they were at the .20 level. Thus, among the metropolitan students, these socio-economic variables appear to be more related to ability than to school achievement, while for the other two groups these relationships were equal. For high school rank as for test scores, the number of books in the home showed a higher relationship for the girls than for the boys.

Table 7-11

Comparisons of Correlation Coefficients Between Scholastic Aptitude Test Scores and Socio-Economic Variables

Variable	Area	Male		Female	
		1950	1961	1950	1961
Father's Occupational Level	Metropolitan	-.27	-.28	-.14	-.30
	Non-Farm	-.21	-.37	-.28	-.26
	Farm	-.13	-.13	.04	-.11
Father's Educational Level	Metropolitan	.31	.17	.23	.35
	Non-Farm	.29	.13	.33	.29
	Farm	.16	.14	.16	.26
Mother's Educational Level	Metropolitan	.26	.21	.20	.24
	Non-Farm	.32	.20	.35	.30
	Farm	.14	.17	.14	.34
Income	Metropolitan	.23	.11	.06	.00
	Non-Farm	.16	.16	.12	.18
	Farm	-.07	.01	.00	.00
Number of Books	Metropolitan		.25		.42
	Non-Farm		.17		.30
	Farm		.17		.29

Note--See Tables 1-10 for sample sizes involved in these correlations.

Table 7-12

Comparison of Correlation Coefficients Between High School Percentile Rank and Socio-Economic Variables

		Male		Female	
Variable	Area	1950	1961	1950	1961
MSAT	Metropolitan	.50	.54	.57	.68
	Non-Farm	.66	.67	.68	.73
	Farm	.66	.69	.68	.69
Father's Occupational Level	Metropolitan	-.04	-.06	-.13	-.19
	Non-Farm	-.34	-.25	-.28	-.30
	Farm	-.13	-.07	-.03	-.11
Father's Educational Level	Metropolitan	.10	.06	.11	.31
	Non-Farm	.33	.10	.27	.30
	Farm	.13	.17	.08	.23
Mother's Educational Level	Metropolitan	.14	.15	.17	.12
	Non-Farm	.35	.18	.30	.32
	Farm	.07	.17	.00	.22
Income	Metropolitan	.06	.10	.15	-.09
	Non-Farm	.12	.13	.08	.23
	Farm	-.11	.02	.09	.03
Number of Books	Metropolitan		.18		.31
	Non-Farm		.04		.29
	Farm		.13		.24

Note--See Tables 1-10 for sample sizes involved in these correlations.

Chapter 8

PERSONAL VALUES AND ATTITUDES AND POST-HIGH SCHOOL PLANS

For students in 1950 and 1961, post-high school plans were related to their ability and sex, academic record, socio-economic status, and the region from which they came. Within any one group, however homogeneous on the basis of all these variables, students can be found who have different plans. If all of the students were selected who had high test scores, superior school grades, and families with similar educational and economic backgrounds, some in this group would be planning to attend college and others would be planning to seek employment immediately after high school graduation. Although much of the variance explaining post-high school plans can be attributed to these variables, much of the source of variance remains to be identified.

An attempt was made to explore some of the more obscure determinants of post-high school plans by investigating the social and personal attitudes, values, and experiences of students. The attitudes elicited by the questionnaire were directly related to social behavior and social conformity. An attempt was made to study how students who decide to attend college were different from others on the basis of these personality variables.

The questionnaire contained 25 personality inventory items from the Minnesota Counseling Inventory (MCI). Thirteen of these items were the most discriminating items from the social relations scale and 12 from the conformity scale. Scores on the social relations scale refer to the nature of the student's relations with other people. Students with low scores are generally gregarious and appear to be happy and comfortable with others. Usually they have good social skills. Students with high scores tend to be socially inept and unhappy and uncomfortable with groups of peers or adults.

The conformity scale was derived from the psychopathic deviate scale of the Minnesota Multiphasic Personality Inventory (MMPI). Students with low scores usually are reliable and responsible. Although not necessarily docile or overly submissive, they understand the need for behavior codes and social organization. Students with high scores are likely to be irresponsible, impulsive, and rebellious. They tend to be individualistic, self-centered, and some have juvenile court records. In addition to items from these two scales, four other items were included which dealt with willingness to take risks and willingness to accept responsibility for one's behavior.

The responses to these personality items made by seniors who planned to get a job following high school graduation were compared with the responses of seniors who planned to attend college. Separate analyses were done for each sex and for students from each of the three residence areas--metropolitan, farm, and non-farm. The responses to these items are shown according to sex, area, and plan in Table 8-1.

Table 8-1

Percentage of Seniors Responding "True" to Questionnaire Statements

Statement	Male						Female					
	Metro		Non-Farm		Farm		Metro		Non-Farm		Farm	
	Job	Col	Job	Col	Job	Col	Job	Col	Job	Col	Job	Col
1. I meet strangers easily. (SR)	68	76	68	76	64	71	65	77	68	78	66	72
2. I get along as well as the average person in social activities. (SR)	88	94	88	94	90	94	93	97	92	97	92	95
3. In school I sometimes have been sent to the principal for cutting up. (C)	41	23	43	28	38	23	10	6	10	6	7	5
4. I feel self-conscious when reciting in class. (SR)	62	45	64	44	64	52	73	49	71	48	73	50
5. I am sure I get a raw deal from life. (C)	9	3	10	3	10	3	3	4	5	2	5	1
6. I feel at ease with people. (SR)	69	80	67	81	71	77	76	84	72	83	72	79
7. At times I have very much wanted to leave home. (C)	50	31	49	30	47	27	51	35	51	34	43	29
8. I have difficulty in starting a conversation with a person who has just been introduced. (SR)	50	36	51	37	56	47	41	29	44	31	49	39
9. I find it hard to keep my mind on a task or job. (C)	25	23	21	23	18	20	21	22	24	22	23	19
10. I enjoy speaking before groups of people. (SR)	11	29	8	26	9	22	11	29	10	29	9	28
11. I know who is responsible for most of my troubles. (C)	60	63	59	64	60	60	68	70	66	73	60	67
12. My parents have often objected to the kind of people I go around with. (C)	30	12	32	13	25	11	20	8	24	8	20	6
13. I am rather shy in contacts with people. (SR)	35	27	39	27	42	36	38	29	39	29	46	37
14. No one seems to understand me. (C)	14	8	13	9	13	9	12	8	14	9	12	10

(Table 8-1 Continued)

Statement	Male						Female					
	Metro		Non-Farm		Farm		Metro		Non-Farm		Farm	
	Job	Col	Job	Col	Job	Col	Job	Col	Job	Col	Job	Col
15. I enjoy entertaining people. (SR)	51	65	46	61	41	53	70	77	64	72	64	66
16. My family does not like the work I have chosen or the work I intend to choose for my life work. (C)	11	3	9	2	8	3	5	4	5	4	4	3
17. I like to meet new people. (SR)	83	89	82	87	82	86	90	94	91	94	92	92
18. My parents and family find more fault with me than they should. (C)	25	14	23	14	19	14	18	10	18	11	17	10
19. I dislike social affairs. (SR)	24	10	29	13	20	12	9	4	10	6	9	7
20. If people had not had it in for me I would have been much more successful (C)	5	2	7	2	6	2	3	1	3	1	3	1
21. I find it easy to express my ideas. (SR)	43	58	41	59	38	51	38	51	36	53	35	48
22. I wish I were not so shy. (C)	44	33	44	34	52	45	44	33	43	33	51	42
23. I avoid people when it is possible. (SR)	19	11	21	11	18	13	12	6	13	6	12	9
24. I have had very peculiar and strange experiences. (C)	42	32	43	34	41	31	35	25	35	30	31	23
25. I stay in the background at parties or social gatherings. (SR)	26	21	29	21	29	24	17	16	19	15	35	23
26. Most of my close friends are planning to go to college.	38	86	37	86	26	77	35	85	33	84	27	73
27. Would you say that your high school grades are a fairly accurate reflection of your ability? Yes Response	34	41	34	43	40	54	57	62	59	65	68	76
28. Do you think that most of the important things that happen to people are:												
More the result of circumstances beyond their control.	10	5	10	4	11	5	6	3	7	3	7	5
More the result of their own efforts.	85	94	88	95	87	94	92	96	92	96	92	95

(Table 8-1 Continued)

Statement	Male						Female					
	Metro		Non-Farm		Farm		Metro		Non-Farm		Farm	
	Job	Col	Job	Col	Job	Col	Job	Col	Job	Col	Job	Col
29. If you had your choice, which type of job would you pick?												
a. A job which pays quite a low income but which you are sure of keeping.	27	13	29	15	29	18	41	24	44	28	46	32
b. A job which pays a good income but which you have a 50-50 chance of losing.	39	39	43	43	48	48	41	48	40	47	42	50
c. A job which pays an extremely good income if you make the grade, but in which you lose almost everything if you don't make it.	31	44	26	40	21	33	16	26	14	23	10	17
N	970	4414	1204	3753	1239	1670	2391	3655	2430	3151	2421	1490

Significant differences (.05 level) listed in text

Students from each of the different areas and of each sex responded differently to many items dealing with social relations and conformity. In order to investigate these personality factors as they were related to post-high school plans, analysis had to be done by sex and residence groups.

Sex Differences

The two sexes responded differently to many of the items. Significant differences (.05 level) were found on 9 of the 13 social relations items (2, 4, 6, 8, 15, 17, 19, 23, 25) with girls responding more often in the direction of better social relations. Boys showed significantly less conformity on 7 of the 12 items from the Conformity Scale (3, 5, 11, 12, 18, 20, 24). In general, girls responded to statements in such a way as to indicate that they were more sociable than boys, and the boys responded in such a way that indicated that they were more often in trouble with their families or with other authority figures.

Girls also more often felt that their high school grades were an accurate reflection of their ability. On the item dealing with the student's willingness to risk taking an insecure but extremely well-paid job, the girls were more conservative than the boys. For example, among the metropolitan girls planning to attend college, 26 per cent were willing to take a job that provided a very good income but which they might easily lose; whereas 44 per cent of the college-bound metropolitan boys were willing to take this risk.

Differences Between Geographic Regions

In their responses to these items, the boys and girls coming from the metropolitan areas and from the non-farm areas were remarkably similar. Comparisons of the farm students with those from the other two areas, however, revealed greater differences. For the boys, significant differences were found between the other two groups and the farm group on seven social relations items (1, 4, 8, 13, 15, 21, 22) and three conformity items (3, 9, 12). Among the girls significant differences were also found on seven social relations items (1, 6, 8, 13, 15, 22, 25) and three conformity items (7, 11, 24). These differences in item responses showed that the boys and girls from the farm felt less social comfort and perhaps less need for social behavior than did the other students. For example, of the metropolitan boys planning to attend college, 45 per cent indicated they felt self-conscious when reciting in class, as compared with 52 per cent of the farm boys with similar plans. Thirty-six per cent of the metropolitan college-bound boys said they had difficulty in starting a conversation with a person who has just been introduced, as compared to 47 per cent of the boys from the farm. Exactly one-third of the metropolitan college-planning boys said they wished they were not so shy, as compared to almost one-half of the farm boys.

More difficult to interpret is the difference in response between these two groups on the item, "Would you say that your high school grades are a fairly accurate reflection of your ability?," where significantly more of the farm boys agreed with this statement. Significantly more of the farm boys expressed a preference for a fair income with a fairly safe job, whereas more of the metropolitan boys were willing to gamble on a good income in a job that was less safe. In general, the differences were in the same direction and of a comparable size for the girls.

The items showing the greatest differences among the regional groups were items coming from the Social Relations Scale of the MCI. There is little question that young people coming from the farm differ from other students in their social skills and attitudes.

Differences Among Students With Varying Post-High School Plans

Although students from metropolitan, non-farm, and farm areas respond to many of the items differently, the differences between college and job-planning students tend to remain the same from one region to the other. Therefore only the metropolitan groups will be discussed here, as these differences apply equally well for the other areas.

When the metropolitan boys planning to obtain jobs were compared to those planning to attend college, differences were statistically significant beyond the .01 level of probability for all of the items drawn from the Social Relations Scale and for all but two of the items drawn from the Conformity Scale (9 and 11). Responses were significantly different for all but one (29b) of the non-MCI items.

Because of the large number of cases involved in these comparisons, 970 job-seeking and 4,414 college-planning men, a small difference in proportions attains statistical significance. An examination of the figures reveals that these differences are more than just statistically significant, that they have many practical applications.

> In each case, the students contemplating college indicated they saw themselves as being more sociable, they expressed less shyness, and they indicated they had fewer conflicts with family and authorities. Not only do these two groups differ on the basis of socio-economic status and abilities, but they also differ on the basis of social experiences and attitudes.

Some of the differences were quite large. Twenty-nine per cent of the college-planning students said they enjoyed speaking before groups of people, as compared to 11 per cent of the boys planning to obtain jobs. Related to this is a difference in response to the item, "I feel self-conscious when reciting in class." Of college-planning boys, 45 per cent expressed self-consciousness as compared to 62 per cent of the job-seeking boys. In both groups a large proportion of students expressed social satisfaction. For example, although the college-planning students expressed more enjoyment than did the job-planning students in meeting new people, even among the job-planning group 83 per cent said they liked to meet new people. The large majority of job seekers expressed no dislike for social affairs, although the difference between the two groups here was great, with 24 per cent of the job seekers disliking social affairs as compared to 10 per cent of the college planners.

The differences were even larger for the conformity items. Close to one-half of the job seekers, 41 per cent, had been sent to the principal for cutting up, as compared to 23 per cent of the college planners. One-half of the job seekers at one time or another had very much wanted to leave home, as compared to less than one-third of the college planners. More than twice as many job seekers as college planners reported their parents have objected to their friends. Apparently most of these students had chosen work of which their families approve, although 11 per cent of the job planners reported their families disapprove of their occupational plans, as compared to only 3 per cent of the college planners. The two groups differed significantly in their responses to how accurately their school grades reflected their ability. The college planners more often tended to regard their school grades as an accurate reflection of their ability, although only 41 per cent (as compared with 34 per cent of the job seekers) agreed with this statement. Whether disagreement with this statement implied that the student regarded his school grades as an over or an under-reflection of his performance is not known.

One of the most interesting and significant differences concerns the willingness of the two groups to take risks on jobs. The proportions expressing a preference for a job which pays a good income and which offers moderate security was the same, but twice as many of the job seekers preferred a low-income, secure job than did the college planners, and 44 per cent of the college planners preferred a high-income, less-secure job as compared to only 31 per cent of the job seekers. Obviously, these men were not a security-ridden group, although a significant proportion of both job seekers and college planners placed much emphasis on keeping a job.

Comparisons similar to those made for the metropolitan men were made between the girls from metropolitan areas who planned to obtain jobs and those who planned to attend college. For the women the differences were statistically significant beyond the .01 level for all but one of the items (25) drawn from the Social Relations Scale, and for all but three of the items (9, 11, 16) drawn from the Conformity Scale. The responses were significantly different for all the non-MCI items. Again the differences were impressively large.

Differences Among Homogeneous Groups

The plans of students depend in part on their ability and in part on their socio-economic status, and in turn attitudes and values of students vary according to their abilities and socio-economic status. The marked relationship found between values and attitudes and post-high school plans might be attributed to either or both of the other two variables, socio-economic status and ability. Therefore the data were further analyzed to determine the extent to which this was true.

A group was selected consisting of 780 boys and 1074 girls with Minnesota Scholastic Aptitude Test scores of above 45 (83rd percentile for high school seniors) and who had fathers in occupations classified as skilled tradesmen, factory workers, laborers, or unskilled laborers. This group, then, included students falling in the upper 17 per cent of Minnesota high school graduates on the basis of college aptitude, and came from the lower socio-economic strata. Of the boys, 84 per cent planned to attend college, and of the girls, 64 per cent. Only 6 per cent of the boys planned to seek jobs immediately after high school as compared to 16 per cent of the girls. The remainder of the students planned to attend other kinds of schools, join the military service, marry, or complete other plans.

Responses to nine of the personality inventory items (1, 2, 3, 6, 7, 16, 19, 21, 22) were significantly different at the .05 level of probability when men planning to attend college were compared to men planning to get jobs, and the same number, but different items (6, 7, 8, 10, 12, 14, 15, 16, 18) differentiated among the women. As reported above, for the total group 23 of the 25 items among the men and 21 among the women produced differences that were statistically significant. It can be assumed that some differences on many of the items could be attributed to differences in ability and socio-economic status related to post-high school plans. For these nine items for each sex, however, large and statistically significant differences were found to persist between students planning to attend college and those planning to seek jobs even after attempts had been made to control the effects of both ability and socio-economic status. In some cases the size of the difference was larger for the more homogeneous group than for the total group.

For example, in responding to the item, "I meet strangers easily," the total group of metropolitan men responding "Yes" to this item was 68 per cent among the job planning and 76 per cent among the college planning. Among the homogeneous ability and socio-economic groups, the percentages were 55 and 72. The item, "I get along as well as the average person in social activities," was responded to affirmatively among the total group by 88 per cent of the job-planning men and 94 per cent of the college-planning men. Among the more homogeneous group, 77 per cent said "Yes" among the job-planning and 92 per cent among the college-planning men. No differences were found on the last two items pertaining to responsibility for actions and to job security.

Summary

This analysis investigated the relationship between certain personality factors and students' post-high school plans. Responses to personality inventory items varied according to the sex of the student, the region from which he came, and whether he planned to attend college.

Girls perceived themselves as more sociable than boys did. Boys indicated more often than girls that they were in trouble with their families and other authority figures. Young people from farms appeared to be less sociable than other young people. Both boys and girls planning to attend college indicated greater social needs and more social competences than the students planning to seek jobs. College planning students also described themselves more often as "good boys and girls" than did the other students, although in any case the results provided a picture of a large group of students, regardless of plans, who regarded themselves as socially competent and comfortable and also as well-behaved.

A group of bright students from somewhat similar family and home backgrounds was selected and this group was divided between those planning to attend college and those who were not. Again these two groups differed markedly on the basis of their responses to personality inventory items.

> Again the college-bound students expressed more ease in social situations, less difficulty with authority figures and more favorable relationships with the family. These attitudes and personal values continued to differentiate between students who planned to attend college and those who planned to seek jobs after graduation from high school even in this homogeneous group.

Chapter 9

STUDENTS PLANNING TO ATTEND COLLEGE

In 1961 of the 44,756 students who expressed some post-high school plan, 18,233, or 41 per cent, were planning on attending a college. These plans were related significantly to the sex of the student. Forty-five per cent of the males planned to attend college as compared with 37 per cent of the females. In each of the three areas proportionately more boys than girls planned to attend college. The proportions planning to attend college by sex and area were:

Area	Boys	Girls
Metropolitan	54	45
Non-Farm	48	38
Farm	28	25

About 10 per cent more of the boys than of the girls from the metropolitan and non-farm areas planned to attend college while the proportions of each sex living on farms and planning on college were about equal.

The proportion of college bound metropolitan students, 50 per cent, was about twice as large as that for farm students, 26 per cent. The proportion for the non-farm students fell in between, tending more toward the metropolitan group, 43 per cent.

In 1950 a slight relationship was found between age and college attendance and a larger proportion of the younger students than of older students planned to attend college. In 1961 when the students completed the questionnaire in January of their senior year, 83 per cent of the college bound males were 17 years old as compared with 73 per cent of the males planning to seek employment. Only 12 per cent of the college planning boys were 18 years old as compared to 22 per cent of the job seeking boys. Similar but smaller differences were found for the women.

The father's occupation was closely related to college plans. Among the non-farm males planning on college, 13 per cent had fathers in the professions while only 2 per cent of males seeking jobs did.

Parents' education was also closely related to student's post-high school plans. Among the non-farm males planning on college, 20 per cent had fathers who were college graduates as compared with only 2 per cent of those who planned to seek jobs. At the same time, only 23 per cent of non-farm males who planned on college had fathers with no more than an eighth grade education as compared with 54 per cent from this group who planned to get jobs. Similar differences were found among students of both sexes and from all residence areas.

Among the metropolitan students of both sexes, about 25 per cent had parents who had graduated from high school but had no further formal education. If their parents had any education beyond high school the children tended to go to college, while if their parents were not high school graduates, they planned to enter college in smaller numbers. Educational levels of fathers were highest in the metropolitan areas and lowest in farm areas. For example, among the college-bound students, 13 per cent had fathers who had no more than an eighth grade education, as compared with 23 per cent in the non-farm areas and 54 per cent in the farm areas. Only 8 per cent of the college-bound farm males had fathers who had some college work as compared with 37 per cent of the fathers of of the college-bound metropolitan students. The educational level of fathers of 1961 students was higher than the level of fathers of students in 1950. Twenty-two per cent of the male metropolitan college-bound graduates in 1950 had fathers who had no more than an eighth grade education as compared with only 13 per cent in 1961. In 1950, 17 per cent of the male metropolitan college-bound students had fathers who were high school graduates but had not taken further training as compared with 26 per cent of the 1961 graduates.

The relationship between college plans and the educational level attained by the mother was similar to that characterizing the educational level of the father. Among college-bound students of both sexes from both metropolitan and non-farm areas, 16 per cent had mothers who were college graduates as opposed to only 3 per cent of the students seeking employment. The proportion of college-bound students who had mothers who had not graduated from high school was much smaller than those with fathers who had not graduated from high school. As was true for the educational level of fathers, the level of maternal education was higher than that in 1950, but the relationship with post-high school plans was similar. Again educational levels were highest among urban mothers, next highest among non-farm mothers, and lowest among farm mothers.

Family Income

College attendance is strongly related to source of family income. Among the college-bound metropolitan males, 17 per cent came from families where the principal source was professional fees or business profits, as compared with 6 per cent who planned to get jobs. Of the students planning on college, the percentage coming from families where the income was from salaries was just twice as great as for students seeking employment, while this difference was just reversed where family income was based on hourly or daily wages. The relationships were similar for both sexes.

These differences, of course, do not hold true for farm students, where farm profit represents the principal source of income for over two-thirds of the students. Even among these students, however, differences in this direction do occur. Seventy-four per cent of students from the farm planning on college had families where the principal source of income was farm profits, while a lower proportion, 64 per cent, of those planning to seek jobs came from such families. Among students who live on farms, of those planning on seeking employment, 20 per cent had fathers working for hourly wages, a percentage almost twice that of students who planned to attend college, 11 per cent.

Responses on the items on which students were asked to describe the adequacy of their family income showed a significant relationship to college attendance, but as was true in 1950 the relationship was much smaller than most people might expect. For example, among the non-farm males, 3 per cent of those going to college said that their families frequently had difficulties making ends meet, as compared with 9 per cent of those seeking jobs. On the other hand, 61 per cent of the college-bound students felt their families were comfortably well off financially, as compared with 47 per cent of those seeking jobs. These differences were similar among both males and females from both the metropolitan and non-farm areas. In 1950, the percentage of college-bound students from the farm who checked each of the response categories was similar to those given by students from other areas. The 1961 farm students felt their family income was significantly less adequate than those of 1950, and about 10 percentage points fewer college-bound farm students felt their families had a comfortable income than those from other areas.

Size of Home

There was a slight tendency for college-bound students to less often come from homes with four or five rooms, and more often come from homes with ten or more rooms. The differences in size of home were small and were not found among students from the farm. The differences found on this variable in 1950 were equally small. College-bound students also more often reported having an unshared bedroom than did students with other types of plans, and this is true for both sexes from all residence areas. Among the metropolitan males, 59 per cent of those planning on college had bedrooms of their own as compared with 48 per cent of those planning to seek employment. The number of people in the home was not related to post-high school plans.

Cultural Status of Home

> Students planning to attend college reported many more books in their homes than did those with other plans.

Among non-farm boys planning on college, 38 per cent reported over 100 books in their home, as compared with only 16 per cent of the non-farm boys planning to seek employment. Twelve per cent of the non-farm boys seeking jobs reported less than ten books, as compared with 2 per cent of those planning on college. The sexes were not different in number of books reported by college-bound students, but regions were. Forty-six per cent of the metropolitan, 38 per cent of the non-farm, and 26 per cent of the farm students planning on college reported over one hundred books in their home. At the same time, 9 per cent of the metropolitan, 12 per cent of the non-farm, and 19 per cent of the farm college-bound students reported fewer than 25 books in their home. Proportions of college-bound students reporting various numbers of books in their home in 1961 were almost exactly the same as the proportions found in 1950. Differences between the various regions also remained the same.

Proportions of college-bound students reporting various magazines in their home also remained similar for many of the magazines surveyed. Although metropolitan and non-farm groups reported differences in number of books in the home, these differences were much smaller for most of the magazines surveyed. The farm groups remained different from the others in regard to numbers and types of magazines in the home. Several farm magazines were taken by a large majority of the farm families, and three farm magazines were each found in almost 75 per cent of the farm homes--a larger coverage than is found for such magazines as the Reader's Digest and Life in any of the areas. Sixty-five per cent of the college-bound metropolitan and non-farm students reported the Reader's Digest was taken in their homes, as compared with 55 per cent of college-bound students from the farm. The Saturday Evening Post was checked by 35 per cent of the metropolitan students, 41 per cent of the non-farm, and 29 per cent of those from the farm. Large differences continued to be found in the magazines checked by students with various post-high school plans. Twenty percentage points fewer students in each of the regions who planned to get jobs checked the Reader's Digest, as compared with those bound for college. Time magazine was checked by 29 per cent of the metropolitan, 21 per cent of the non-farm, and 10 per cent of the farm college-bound students, while for those seeking jobs the percentages were 11 per cent, 8 per cent, and 5 per cent, respectively. Differences were not found for magazines such as True, Argosy, Sports Afield, or Popular Mechanics and Popular Science.

> Students planning to attend college more often reported their parents were members of almost all types of organizations than students with other types of post-high school plans.

The only exception to this pattern was labor unions and The Farmers Union, organizations with which parents of college-bound students were less likely to be associated. The parents of metropolitan male college-bound students were more likely to be members of the PTA (64 per cent) than were parents of non-farm (54 per cent) or farm (56 per cent) college-bound males. Parents of metropolitan college-bound women were even more likely to be members of this organization, with 74 per cent being members of the PTA. No sex differences were found for the other two regions. Membership in veteran's organizations was more typical of non-farm parents than metropolitan or farm parents. Metropolitan students more often reported their parents were members of a labor union, non-farm students next, and the smallest number was found among the farm students. Mother's membership in the ladies' aid reversed this relationship. Over half of the college-bound students from the farm had mothers in this organization, as compared with a third from the non-farm areas and less than 10 per cent from the metropolitan area. Church organizations showed similar relationships, but the differences were smaller.

Large differences were found in membership in organizations between parents of college-bound students and parents of students with other plans. Sixty-four per cent of the college-bound metropolitan males reported their parents were members of the PTA as compared with 34 per cent of those planning to seek employment. Twenty-nine per cent of the non-farm girls planning on college reported their parents were members of a neighborhood club, as compared with 17 per cent of those seeking jobs, and similar results were found for non-farm boys. Over 50 per cent of the farm students planning on college said their mothers were members of the ladies' aid, as compared with 40 per cent of those seeking jobs, and for church organizations these proportions were 70 per cent for the college-bound farm students and 55 per cent of the job seekers.

These relationships between membership in organizations and college attendance were similar to those found in the 1950 survey, with a few noteworthy differences. Membership in PTA groups did not change significantly among the parents of metropolitan college-bound students, but it increased significantly in the non-farm and farm areas. PTA groups apparently have grown in membership in the outlying areas during the past decade. Membership in veteran's organizations has decreased, and membership in the ladies' aid has decreased considerably in the metropolitan and non-farm areas, but remained strong among the parents of college-bound students from the farm. In 1950, the proportion of college-bound students whose fathers were members of a labor union included about 25 per cent of the metropolitan students and smaller proportions of students from other areas. This proportion in 1961 remained about the same for the metropolitan area, but increased in other areas, particularly among students living on farms.

Financial Aid From Family

Fifteen per cent of the college-bound males and 10 per cent of the females stated that they would receive no financial help from their families in meeting the expenses connected with going to college. These proportions were similar among students from all residence areas. They represented a slight increase in the proportion of college-bound students receiving no family help in 1961 over 1950. Among the men the increase was small, from 12 per cent in 1950 to 15 per cent in 1961, but it increased substantially among the women, from 5 per cent in 1950 to 10 per cent in 1961.

Some students expected their parents to pay all of their college expenses; 20 per cent of the metropolitan and non-farm girls and 13 per cent of the farm girls expected complete financial aid. This figure was only about 8 per cent for the boys from all areas. The proportion of college-bound students expecting their parents to pay all has decreased substantially over the past decade, particularly among the women. In 1950 these percentages were 34 per cent for the metropolitan and non-farm girls and 28 per cent for the farm girls, and among the men the proportion was 12 per cent from all areas. About a third of the college-bound girls and a quarter of the college-bound boys expect their parents to pay most of their expenses and about a half of the boys and a third of the girls expect their family to pay some of their college expenses.

As a whole, for students from all areas and of both sexes the trend over the past decade is toward expectations of less of college expenses to be met from family sources.

Family's Attitude Toward College

Eighty-two per cent of the college-bound students reported their parents "wanted" them to attend college. This proportion was the same for both sexes and for all residence areas. This was also substantially the same proportion of students indicating this family attitude toward college in 1950. Differences did occur, however, in proportions reporting other types of family attitudes, either insistance that they attend college or indifference to their going. Fifteen per cent of the 1961 college-bound metropolitan and non-farm males reported their parents insisted that they attend college, while only 9 per cent of those from the farm indicated this attitude. This figure of 9 per cent from the farm represents a substantial increase over that reported in 1950, when only 4 per cent of the college-bound males said their parents insisted that they attend college. The proportions indicating this attitude among the metropolitan and non-farm groups did not change over this period. Somewhat fewer college-bound girls reported their parents insisted that they attend college, with 10 per cent of the metropolitan and non-farm girls and 4 per cent of the farm girls stating their parents insisted that they go to college. These proportions were similar to those reported in 1950.

Only among the college-bound males from farms was there a substantial number stating their parents were indifferent to their going to college, and here 10 per cent of them indicated this attitude. Among the college-bound males not living on the farm this proportion was only 2 per cent. These proportions were considerably smaller than reported in 1950, when 19 per cent of the college-bound males from the farm and 5 per cent of the others reported parental indifference. More of the girls than boys felt their parents were indifferent to their attending college. Among the girls these proportions were 12 per cent of the college-bound farm females and 7 per cent of the others. These proportions among the girls did not change over the past decade. Almost none of the students planning on college said that their parents did not want them to attend; only among the farm students of both sexes did 1 per cent indicate this attitude on the part of their family.

Educational Background and Plans

Differences in the types of high school curriculums taken by college-bound students were found both between sexes and between regions. The meaning of these differences is confused by the fact that many smaller high schools do not have clearly differentiated curriculums. College-bound males were more likely to take a college-preparatory curriculum than were college-bound females. Metropolitan students were more likely to take a college-preparatory program than non-farm students, and non-farm students were more likely to take such than students from the farm.

Proportions of College-Bound Students Taking College Preparatory Courses

Area	Males	Females
Metropolitan	80	76
Non-Farm	76	72
Farm	70	63

The proportions of college-bound students taking college-preparatory programs increased only slightly in the metropolitan areas but increased greatly for the non-farm and farm regions since 1950. Forty-five per cent of the college-bound boys and 39 per cent of the college-bound girls from the farm took college-preparatory curriculums in 1950, as compared with 70 per cent and 63 per cent, respectively, in 1961. Most college-bound students not taking a college-preparatory course indicated they took a general program. Nine per cent of the college-bound girls and 2 per cent of the boys took commercial curriculums in high school. Six per cent of the college-bound males from the farm took agricultural curriculums, and this is a considerable decrease from the 11 per cent taking this curriculum in 1950. Increased variety of high school curriculums, more clear differentiation between curriculums, as well as more and better guidance in the non-metropolitan schools, probably have led to this increase in the proportions of college-bound students from the non-metropolitan areas taking college-preparatory courses.

Students were asked to check the reasons why they took the curriculum that they did in high school. The proportions of college-bound students giving "counselor's advice" increased from approximately 8 per cent in 1950 to 20 per cent in 1961. The proportions of college-bound students who said they took the curriculum they did because it was the only one offered in their high school were 18 per cent for the farm group and 9 per cent for the non-farm group in 1950, while in 1961 these proportions had dropped to 6 per cent for the farm group and 3 per cent for the non-farm group. The reason most often given by college-bound students was that it fitted their vocational plans the best, checked by 60 per cent of the males and 68 per cent of the females. About a third of them said they found these courses were the most interesting to them, and about a quarter of them gave "parents' advice" as an important reason.

Approximately 75 per cent of the males and 80 per cent of the females gave "preparation for a vocation" as one of the most important reasons they were planning to attend college. For both sexes, proportions checking this item were slightly higher among the non-farm and the farm groups. About a third of the college-bound students checked "getting a liberal education" as a reason for going to college, and this reason was more likely to be checked by metropolitan students than those from other regions. About a third of the college-bound boys and a fifth of the girls gave "will enable me to make more money" as one of their reasons. Twenty per cent of the girls gave the fact that they liked school as a reason, while this was checked by only 10 per cent of the boys.

Large differences were found between both sexes and regions on the item which asked the college-bound students if they were considering any graduate or professional training after their undergraduate college work. This item was answered in the affirmative by 49 per cent of the metropolitan boys, 43 per cent of the non-farm boys, and 34 per cent of the farm boys. Among the college-bound girls these proportions were 29 per cent, 24 per cent, and 20 per cent, respectively. Among the college-bound boys, graduate work in science was the area of graduate training most often given, and it was mentioned by 8 per cent of these college-bound boys. Proportions checking further work in science were similar in all residence areas. Professional training in medicine or law was mentioned by 5 per cent of the metropolitan boys, 4 per cent of the non-farm boys, and 2 per cent of the farm boys. Education was the most frequently mentioned graduate area for the women, 4 per cent of the college-bound girls as compared with 2 per cent of the college-bound men.

Influence of Marriage on Plans

Smaller proportions of college-bound students said that marriage influenced their plans for the coming year than did students with any other type of plan. Three per cent of the males and 5 per cent of the females, however, said that the prospect of marriage did influence their plans. This compares with 10 per cent for the males and 25 per cent for the females who planned to seek jobs on graduating. Less than 1 per cent of the college-bound students were already married or planned to be married on graduating from high school. One per cent of the girls and less than 1 per cent of the boys said they planned to be married the year after that. Sixty-four per cent of the males and 57 per cent of the females had no idea when they might get married. The college-bound students had fewer actual plans for marriage than did students with any other type of plan. There were considerable differences between males and females in marriage plans, but no differences between residence areas.

Chapter 10

STUDENTS PLANNING TO SEEK EMPLOYMENT

About a quarter of the 1961 graduating high school seniors indicated they planned to enter the labor market upon graduation from high school. Over twice as many girls planned to get jobs, 32 per cent, as did boys, 15 per cent. These proportions also varied considerably by residence area. For the boys, the proportions planning to seek jobs were: metropolitan, 12 per cent; non-farm, 15 per cent; and farm, 21 per cent. For the girls, these figures were 30 per cent, 29 per cent, and 40 per cent, respectively. As was discussed in a previous chapter, these proportions planning to seek employment, especially among the boys, were considerably smaller than they were in 1950.

In addition, another 3 per cent of all graduates said they planned to work for their parents upon graduation. They are not included in this discussion. This group consisted primarily of the 15 per cent of the farm males and 8 per cent of the farm females planning to stay home and work on the family farm.

Aptitude and Achievement

The mean aptitude test scores of students planning to get jobs were lower than means of students with other types of plans. For example, among the non-farm males, those planning to get a job had a mean MSAT score of 23, the 39th percentile for high school students and the 14th percentile for those who enter college.

The differences found between plans on aptitude test scores resembled those for high school rank. The mean high school rank for those seeking employment was 30 for the boys and 47 for the girls. Students seeking employment tended to have mean high school percentile ranks lower than groups planning on other activities.

Age

The median age for students planning to seek employment was 17.6. A slightly higher proportion of job-seeking students was 18 years or older, but generally speaking, there were no meaningful differences in the ages of students planning to seek employment and those with other plans.

Occupation of Parents

Among the job-seeking students of both sexes from the metropolitan areas, about a third had fathers in the skilled trades, and about a quarter had fathers who were laborers or factory workers. In the non-farm areas, the proportions were more equal, running between 25 and 30 per cent in each of the two occupational categories. Naturally most of those who were living on farms and planning to work came from homes where the father was a farmer. These proportions have not changed significantly over the past 11 years. Only 2 per cent of the job-seeking students who did not live on farms had fathers who were in professional occupations. In 1950 this proportion was 4 per cent, so that the proportion of job-seeking students with fathers in the professions has dropped about one-half since 1950, and this drop has been consistent among students of both sexes and from each of the residence areas. Among students from farms, there was a significant tendency for students to be more likely to seek employment if their fathers were not engaged in farming and were in skilled trades or laboring occupations, fields in which non-farming parents who live on farms are most often employed. Students from these homes are more likely to seek employment than they are to continue their education.

> Students seeking employment are more likely to come from homes where the father is from a lower-level job such as skilled tradesman or laborer, than is true for students with other types of plans.

Although substantial changes were found in parental occupation over the past 11 years among students with various other plans, the proportion of job-seeking students reporting various types of parental occupations remained substantially the same. The exception here was the proportion of farm students reporting their father engaged in farming, which dropped considerably for students in all of the plan groups.

Education of Parents

The median educational level of the fathers of students planning to get jobs was "some high school" for those from the metropolitan area, and an eighth-grade education for the non-farm and farm groups. Students planning to get jobs had higher proportions of fathers with no more than an eighth-grade education than did students with any other types of plans, and the proportion of fathers with an eighth-grade education or less was much higher than it was for students planning to attend college. For example, among non-farm males, 54 per cent of the job seekers had fathers with no more than an eighth-grade education, as compared with only 23 per cent of those planning to attend college. About 10 per cent of the metropolitan job-seeking students of both sexes, five per cent of the non-farm, and 2 per cent of the farm students had parents with some college education. Among the college-going male students these percentages were 37 per cent, 30 per cent, and 8 per cent, respectively. There were no real differences between the sexes among students seeking employment. Parents from the metropolitan areas were better educated than those from the non-farm area, and those from the non-farm area had considerably more education than those from farms. Educational levels of parents of job seekers increased considerably over the past ten years, as did the educational levels of all parents. In the metropolitan areas the principal increase was from an eighth-grade education to a high school education, while in the farm areas the largest increase was from less than an eighth-grade education to completion of the eighth grade. The proportion of job-seeking students with college-educated parents increased only slightly since 1950.

The modal level of the mothers of students planning to seek jobs was high school graduation for the metropolitan group, some high school for the non-farm group, and completion of the eighth grade for the farm group. The educational level of the mother was also lower among job-seeking students than for those with all other plans, and considerably lower than those planning to attend college. For example, among the non-farm men, 7 per cent of the job-seekers had mothers who had had some college training, as compared with 32 per cent of those planning on college.

Family Income

Of the metropolitan students of both sexes planning to seek jobs, 66 per cent came from families where the principal source of income was hourly or daily wages. For the non-farm group this figure was 54 per cent. In both the metropolitan and non-farm area, roughly twice the proportion of students who come from families where income is derived either from professional fees and profits or salary go to college as seek jobs, while about twice the proportion of those from families where the family income is from wages seek jobs as opposed to attending college.

With the exception of students from the farm, the proportions of the various types of family income among the job-seeking students have not changed since 1950. As would be expected, the proportion of students from farms where the chief source of income is farm profits has decreased during this period. Among families living on the farm, if the source of income is not farm profits it is likely to be wages, and the students from these families are more likely to seek employment than to undertake plans involving further education.

Job-seeking students report their family income to be less adequate than do students with most other types of plans. For example, among both the metropolitan and non-farm job-seeking students of both sexes, 15 to 18 per cent report either that their family frequently has difficulty making ends meet, or that they sometimes have difficulty in getting the necessities. This percentage is about three times the 5 to 6 per cent of the college-bound students reporting this description of family income. As was true for most other plan groups, about the same proportion reported a comfortable income as in 1950, but fewer checked the answer "Have all the necessities but not many luxuries," and this drop was made up by more frequent checking of the two less-adequate income descriptions.

In general, then, in regard to occupational, educational, and economic status, job-seeking students tended to be slightly lower on each of these indices than students with most other types of plans, and considerably below that of the college-bound seniors.

Size of Home

Males seeking employment came from four or five room homes slightly more often than did students with most other types of plans. For example, of the metropolitan males, 19 per cent came from five room homes as compared with 12 per cent of those planning on college and 16 per cent of those going to trade school. On the other hand, only 5 per cent of these metropolitan males came from homes with over 11 rooms, as compared with 11 per cent of those planning on college. Similar differences were found in each of the other residence areas. Among the women, the same differences were found between girls seeking jobs and those planning on college, but smaller differences in size of home were found between girls planning on other types of post-high school training other than college and those seeking jobs. About a half of the students of both sexes planning to seek jobs had an unshared bedroom. This proportion was similar to those with other plans except those planning on college, where 60 per cent had a bedroom to themselves. These figures were similar to those found in 1950. No relationship was found between the number of people in the home and whether or not the student sought employment or made other plans.

Cultural Status of Home

Among students of both sexes who were planning to get jobs, 7 per cent of the metropolitan, 12 per cent of the non-farm, and 14 per cent of the farm students reported fewer than 10 books in their homes. This is a larger proportion than for any other type of plan, and differs greatly from the group planning on college, where, for example, among the non-farm group only 2 per cent of college planners reported less than 10 books, as compared to 14 per cent for those seeking employment. Conversely, the proportion of job seekers reporting over 100 books is smaller than of students with other plans, and much smaller than of those planning on college. For metropolitan students, a quarter of the job seekers reported over 100 books as compared with almost one-half of the college planners.

Smaller proportions of students planning on jobs reported various magazines were in their homes than of students with other plans. For almost any magazine, the highest proportion reporting it was in their home was among those planning on college, and the smallest proportion among those seeking jobs. For the Reader's Digest there was a very large difference between the two groups--65 per cent of the college-going students reported this magazine in their home as compared with 48 per cent of those planning to get jobs. This relationship did not exist for the farm magazines, or magazines such as True and Argosy.

Fewer students seeking jobs reported their parents to be members of most organizations than did students with other plans, particularly those planning on college. These differences did not occur for a number of the fraternal organizations, and a higher proportion of parents of job seekers belonged to the labor unions than of students with most other plans.

Reasons for Plans

Large sex differences in the type of curriculum taken in high school, but few regional differences, were found among students who planned to get jobs. The curriculum taken by almost a half of the boys (45 per cent) was the general curriculum, while over one-half (55 per cent) of the girls took a commercial program in high school. About 27 per cent of the boys took a shop course, 10 per cent a college-preparatory course, and 6 per cent a commercial program. These percentages were slightly smaller among the farm males seeking jobs as about a fifth of the farm boys took an agricultural curriculum in high school. A third of the girls took a general curriculum, and 7 per cent took a college-preparatory program.

> Over half of the girls who planned on
> getting jobs had taken courses which
> provided some direct occupational
> preparation, as compared with
> about one-third of the boys.

The proportion of students planning on jobs who took college-preparatory or general curriculums in high school has decreased considerably since 1950, while the proportion of job-seeking students who took shop course has almost doubled. Thus many more of the males are receiving some occupational preparation in high school than was the case in 1950. Only 20 per cent of the males had taken vocationally-relevant courses in 1950, as compared with about a third of them in 1961. Students may be receiving better guidance in their selection of high school curriculums now than they were a decade ago, and more vocational curriculums may be available.

The differences in occupational training received between the boys and girls are reflected in the reasons reported for taking the chosen curriculums. One-half of the girls indicated that this curriculum fitted their vocational plans best, as compared with a quarter of the boys. Approximately a third of the students of each sex indicated that it seemed the most interesting, and about 20 per cent said they were best in these types of courses. Eighteen per cent of the girls checked "Parent's advice" as compared with 12 per cent for the boys. "Counselor's advice" was the reason given by approximately 10 per cent of these students, and this proportion is more than double that indicating this was the reason in 1950.

In giving their reasons for planning to get a job after graduation, the reason checked most often was that it enabled them to start making money quickly. This reason was checked by one-third of the metropolitan students, 40 per cent of the non-farm, and 45 per cent of the farm students of both sexes. The desire to be independent was a reason checked by over a third of the girls and by a quarter of the boys. Preparation for a vocation was checked by 23 per cent of the boys and 18 per cent of the girls.

Attitude Toward College

Among the girls planning to seek employment, about 27 per cent said they would change their plans and attend college if they had more money, and this proportion did not differ significantly among the three types of residence areas. This proportion represented a significant drop from the 35 per cent of the 1950 girls seeking employment who said they would change their plans and attend college.

In 1950 about 44 per cent of the boys planning to seek jobs reported they would attend college if they could afford it, with only small regional differences on this question.

> In 1961 only 11 per cent of the job seekers from the metropolitan area said they would change their plans and attend college if they had more money. Among the non-farm men this figure was 38 per cent, and among the farm men, 29 per cent. Thus large regional differences appeared among the men in the present survey.

Except for the metropolitan men, the job-seeking students more often said they would change their plans and attend college if they could afford it than did students with any other non-college plan. The proportion of men seeking employment after high school has decreased substantially among men in the metropolitan areas, so that only a small proportion of the metropolitan men (12 per cent) do actually seek jobs after high school. College apparently has become accessible enough to these students so that most who wish to can afford to go. Most of those seeking jobs would do so regardless of their financial status.

The students who said they would go to college if they had more money were asked how much more they would need. About 50 per cent of them said they would need enough to cover all of their expenses. About 43 per cent said they would need enough to pay half of their expenses, and 6 per cent said they would need enough to pay less than half of their college expenses. These proportions were substantially the same for both sexes and from all regions. These figures were also about the same as were those reported in 1950.

When the students who planned to seek employment were asked if they could afford to go to college if they wished to, 10 per cent said they could easily afford it, and 20 per cent said they could barely afford it. Thirty per cent said they could afford it but it would involve many sacrifices, and 40 per cent said they could not afford college. These proportions were similar for both sexes and for all three residence areas. These figures also were substantially the same as those found in 1950.

Many males who were planning to seek jobs upon graduation planned to attend college at some later date, with large regional differences in these plans. Thirty-three per cent of the metropolitan job-seeking boys were planning on eventually going to college, as compared with 27 per cent of the non-farm boys and 19 per cent of those from farms. About one-half of these boys planned to attend college after one year, about a quarter planned to attend after two years, and the remaining quarter planned to attend after three or more years.

The proportions of girls planning on college at a later date were much smaller--14 per cent for the metropolitan girls, 15 per cent for the non-farm girls, and 11 per cent of those from the farm. About two-thirds of these college-directed girls who were getting jobs immediately planned to attend college after a year, and most of the remainder, after two years. Few of the girls who planned to eventually attend college intended to do this after an interval of more than two years.

The mean ability levels of the job-seeking students were well below those of students who planned to enter college, and therefore many of these college plans may not materialize, and if they do, large numbers of these students are likely to have much difficulty with college work. Nevertheless, since far fewer farm students than others have these plans, and more males than females have them, the eventual college attendance of these students serves to make even larger the disproportionate college attendance found between regions and sexes.

Family Attitudes Toward College

Two per cent of the boys and less than 1 per cent of the girls who planned to get jobs said that their parents insisted that they attend college, and these proportions were similar for each region. Over half, 55 per cent, of the metropolitan males who planned to seek jobs said their parents wanted them to attend college. For the non-farm men this proportion was 48 per cent and it was 34 per cent for the farm men. There is a very large difference between residence areas in the proportions of job-planning students who feel their parents want them to attend college. Among the women these differences were much smaller, 34 per cent for the metropolitan girls, 32 per cent for the non-farm girls, and 23 per cent for the farm girls. Women who are planning to seek jobs feel less often than do boys that their parents want them to attend college. At the same time, 8 per cent of the girls said their parents did not want them to attend college, as compared with 3 per cent of the boys. Many more job-seeking students said their parents were indifferent as to whether they attended college than did those with most other plans. The proportions of job-seeking students who said that their parents wanted them to attend college were similar to those reported in 1950.

Influence of Marriage on Plans

> Larger proportions of students planning to seek jobs said that marriage or the early prospect of marriage had influenced their plans than was true of students with other types of post-high school plans.

Ten per cent of the males and 25 per cent of the females who planned to seek jobs said that marriage had influenced their plans, and these proportions were similar for students from each of the residence areas. Almost as large proportions of students going to trade or business school, however, said marriage influenced their plans as did those planning to get jobs. The big difference here occurred between those planning on college or entering nursing and those getting jobs. For example, in the metropolitan areas for students going to college, 3 per cent of the males and 6 per cent of the females said marriage had influenced their plans, as compared with 11 per cent of the males and 26 per cent of the females who planned to seek employment.

Although a tenth of the males and a quarter of the females seeking jobs said that marriage had influenced their plans, many of these students had no immediate plans for marriage. One per cent of job-seeking students were already married, and 1 per cent of the boys and 5 per cent of the girls planned to be married during the year they graduated. Two per cent of the boys and 10 per cent of the girls planned to be married the year following graduation. Only about half of the students who said that marriage was influencing their plans planned to be married by a year and a half after they graduated. Girls planning to obtain jobs anticipated earlier marriage than did those with most other types of plans, and to a far greater extent than girls who planned to attend college. The small percentage of males planning to marry either the year of graduation or in the following year was a little more likely to plan on getting jobs than to plan anything else. For the vast majority of the men, however, there were few differences in marriage plans among those undertaking different types of activities after graduation.

Chapter 11

PLANS OF HIGH-ABILITY STUDENTS

In the 1950 study, special attention was given to the post-high school plans of high-ability students. These were 3,939 students who achieved a score of 120 or above on the American Council on Education Psychological Examination (ACE). They represented the top 18 per cent of the high school seniors on whom data were available. A comparable sample from the 1961 group included all students scoring 45 or above on the Minnesota Scholastic Aptitude Test (MSAT). In this group were 7,351 students, or 17 per cent of the 1961 seniors.

The 1961 high-ability group of students contained more females than males--54.9 per cent were females and 45.1 per cent were males. This difference was due to the scholastic aptitude test used; the MSAT is a test of verbal aptitude on which females excel. In 1950 the ACE was used, a test which contains both verbal and quantitative material, and the sex ratio was more nearly equal; 51.6 per cent were females and 48.4 per cent were males.

The proportions of students from different regions in the high-ability samples also varied. In the total population of students surveyed, regardless of ability, 36.6 per cent were included in the metropolitan group, while 45.4 per cent of the high-ability students came from the metropolitan area. On the other hand, 27.0 per cent of all students lived on farms and only 16.2 per cent of the high-ability students lived on farms. In 1950 the non-farm group, not the metropolitan group, contributed a proportion of high-ability students larger than was expected--36.5 per cent of all students surveyed in 1950 came from these non-farm areas. This change over the past decade of the region from which high-ability students come is difficult to explain. Migration to the metropolitan areas and inclusion in the metropolitan sample of suburban areas during this time might account for small differences, but it is doubtful that these factors alone would account for the large difference which has occurred.

Plans of High-Ability Students

A comparison of the plans of high-ability students for the two survey years is shown by sex and residence area in Table 6-7 in Chapter 6. Eighty-one per cent of high-ability students planned to attend college in 1961, as compared with 67 per cent in 1950, an increase of 14 percentage points. Eight per cent planned to obtain jobs as compared with 18 per cent 11 years earlier. The largest increase of able students attending college occurred among the farm males, with an increase of 21 percentage points, from 61 per cent to 82 per cent. Although the proportion of able girls from the farm attending college increased by 13 percentage points over the 11-year period, these girls still go to college in considerably smaller proportions than any other group.

> Ninety per cent of the able metropolitan males planned to attend college and only 3 per cent planned to seek jobs. The increase in the proportion of high-ability students attending college is three times that for the total population of high school seniors.

Age

At the time of the completion of the questionnaires, over 85 per cent of the high-ability students were 17 years of age. Approximately 10 per cent were 18 years and 5 per cent were 16 years of age. This is a slightly larger proportion of 17-year-olds and a slightly smaller proportion of 18-year-olds than was found in the total population of seniors. The differences between the high-ability students and the total sample were similar in direction to but considerably smaller than those found in 1950. The 1961 high-ability students also showed a smaller age variability than did high-ability students in 1950. They were more likely to be 17 in 1961 and less likely to be either 16 or 18. Approximately 15 per cent of the high-ability girls and 10 per cent of the high-ability boys were 16 year of age in 1950 as compared with less than 5 per cent of both sexes in 1961.

Father's Occupation

As with the total population, the occupation of the father had a relationship to the post-high school plans of high-ability students. Among the high-ability college-bound students, excluding those from farms, 20 per cent had fathers in the professions as compared to approximately 4 per cent of those who planned to seek jobs. On the other hand, a third of the job-seeking high-ability males came from skilled tradesmen's homes as compared with 17 per cent of those who planned to attend college.

The high-ability males who lived on farms were more likely to attend college if their father owned or operated the farm than they were if he was employed in some other type of occupation. Seventy-five per cent of the high-ability farm males planning on college said their fathers owned or operated a farm, as compared with 52 per cent of those planning to seek jobs.

Similar differences were found between the college-bound and job-seeking high-ability girls. Approximately 50 per cent of the girls seeking jobs came from homes where the father was a skilled tradesman or laborer, while less than one-third of the college-bound girls came from these workmen's homes.

The differences between college-bound and job-seeking high-ability students with regard to the occupations of their fathers have remained similar to those found in 1950. In other words, although the proportion of high-ability students planning to enter college has increased considerably and the proportion planning to seek jobs decreased considerably since 1950, the relationship between post-high school plans and occupation of the father has remained substantially the same. When the occupations of the fathers of the high-ability college-bound students from the metropolitan and the non-farm areas were examined, it was found that approximately a fifth of students came from professional families, another fifth from a family where the father owned or managed a business, about a tenth from a family where the father was engaged in sales, and almost a third came from homes where the father was a skilled tradesman or laborer.

Parental Education

The median educational level of the fathers of high-ability students from the metropolitan area was high school graduation for those who planned to seek employment and some training beyond high school for those planning on college. For students from the non-farm area, it was some high school for the job seekers and high school graduation for the college bound; for students from the farm it was an eighth-grade education for students with either plan. Students of both sexes were approximately four times as likely to attend college than they were to seek jobs if their parents were college graduates.

Although the proportion of high-ability students attending college increased substantially over the 11-year period, and the proportion seeking jobs decreased considerably, the relationship of college attendance to parental educational level remained substantially the same for high-ability students in the two studies. For example, among 1961 non-farm boys whose fathers had an eighth-grade education but had not gone further, 38 per cent planned to seek jobs and 16 per cent to attend college, and in 1950 these percentages were 39 per cent and 19 per cent, respectively. Since a larger proportion of high-ability students attended college and smaller proportions sought employment in 1961, we are talking about 16 per cent of a much larger proportion going on to college, and 38 per cent of a much smaller number seeking jobs, even though the ratio of the two percents remains similar.

High-ability students tended to come from families with higher educational levels than students with similar plans in the total sample. Fifty per cent of the high-ability college-bound metropolitan males had fathers who had some college training, as compared with 27 per cent of the college-bound males in the total metropolitan sample. The mothers of high-ability students were also better educated than those of the total sample. Twenty-eight per cent of the mothers of college-bound metropolitan males had attended college, as compared with 38 per cent of the mothers of college-bound metropolitan boys in the high-ability group. Eight per cent of the metropolitan boys seeking jobs had mothers who had been to college, as compared with 14 per cent of the high-ability metropolitan boys seeking jobs.

Among high-ability students from the farm was a large sex difference in the educational levels of the mothers of job-seeking students. Six per cent of the boys who planned to seek jobs had college-trained mothers, as compared with 17 per cent of the girls seeking jobs. Thirty-three per cent of the college-bound boys from the farm and 31 per cent of the college-bound girls from the farm had mothers who had attended college. Considerably fewer fathers than mothers of high-ability farm students had received college training. Ten per cent of the college-bound students of both sexes from the farm had fathers who had some college training, and 3 per cent of the job-seeking boys and 6 per cent of the job-seeking girls had fathers with college training. Among students from the farm, then, the mother is more likely to have attended college than the father. If either parent had college training, the sons were likely to attend college, but high-ability girls were somewhat less likely to attend than boys. Proportions of high-ability students with mothers who had less than a high school education decreased substantially since 1950, while the proportions with mothers who were high school graduates increased since 1950. Proportions of high-ability students who were planning on college or employment whose mothers had attended college both remained substantially the same in the two surveys.

Family Income

Family income continued to be strongly related to college attendance for the high-ability group, although this relationship had decreased somewhat over that found in 1950. In 1961, for the metropolitan males, 17 per cent of the college-bound and 12 per cent of the job-seeking students came from families where the principal income was from professional fees or business profits. Forty-seven per cent of the college-bound students came from homes where the income was from a fixed salary, as compared to 32 per cent of the job seekers. The proportion coming from homes where the source of income was wages was twice as great among the job-seeking students--54 per cent--as it was for the college-bound students--26 per cent. In 1961 a higher proportion of the high-ability college-bound students came from families of wage earners than was the case in 1950. This increase in the proportion of high-ability students from the homes of wage earners who attended college was the principal reason for the decrease in relationship of family income to college attendance. Among the high-ability farm students was an increased tendency to attend college for students from farms where the principal income was derived from farm profits. When the source of income was not farm profits, it tended to be hourly or daily wages, and farm students from these homes were less likely to attend college.

Reported adequacy of family income was also related to the post-high school plans of high-ability students. For example, among the non-farm males, 9 per cent of the college-bound males said they were from well-to-do families, while none of the job seekers reported this level of family income. Sixty per cent of the non-farm college-bound students reported a "comfortable" income, as compared with 43 per cent of those seeking employment. On the other hand, 24 per cent of the college-bound students reported their homes had the necessities but not many luxuries, and 4 per cent reported some difficulty in obtaining the necessities, while among job seekers these proportions were 40 per cent and 14 per cent, respectively. (Proportions of job-seeking and college-bound students reporting the various levels of family income were almost identical to the proportions reporting these levels in 1950, except among farm students.) Among students from the farm, in 1961 fewer of them with all types of plans reported "comfortable" incomes and more reported less adequate incomes than was true in 1950. In 1950, a high relationship was found between adequacy of family income and college attendance among farm students, particularly among the farm males. In 1961, these differences had become smaller, and were largest among the females, while in 1950 a higher relationship was found among the boys.

Books in the Home

Almost all of the high-ability metropolitan males attended college, and no marked differences were found in number of books in the home between the college-bound students and the few seeking jobs. Among other residence groups, differences in the number of books in the home were found between the job-planning and college-bound students. Students coming from homes with over one hundred books more often planned to attend college, while those from homes with less than fifty more often planned to get jobs. The proportions of students reporting various numbers of books in their homes remained similar to the figures reported in 1950 among both the college-bound and job-seeking high-ability groups. Approximately one-half of the college-bound group and a third of the job-seeking group reported over one hundred books in their homes. About 10 per cent of the college-bound and 20 per cent of the job-seeking high-ability students reported less than 25 books in their homes.

Financial Support for College

Approximately 8 per cent of the metropolitan and non-farm males planning to attend college reported that their families would pay all of their college expenses. Among farm males this figure was 4 per cent. Among the girls, these figures were 16 per cent for the metropolitan and non-farm girls and 12 per cent for girls from the farm. The proportion of girls planning on having their parents pay all of their college expenses was approximately twice that of the boys. Metropolitan and non-farm students expected their parents to provide a greater share of their college expenses than did students from the farm. Fifteen per cent of the boys and 10 per cent of the girls expected to be completely self-supporting in college.

In 1950 approximately 14 per cent of the metropolitan and non-farm boys expected their parents to pay all their expenses in college. Among the farm group this proportion was 8 per cent. Among the girls these proportions were 33 per cent and 22 per cent respectively. Thus the proportion of high-ability students expecting their parents to pay all their college expenses decreased somewhat for boys, and decreased dramatically among the girls, where the proportions in 1961 were only half those for 1950. At the same time the proportion of students planning to be completely self-supporting in college increased from 10 to 15 per cent for the boys, and from 5 to 10 per cent for the girls.

In 1961 the proportion of high-ability students attending college was 14 percentage points greater than the per cent planning to attend in 1950. These additional college-bound students tended to come from less well-to-do families who were not going to be able to provide as much financial support in college. The proportions shifted in 1961 toward a larger group of students finding it necessary to be self-supporting in college, and a smaller group obtaining complete family support. Among the girls this shift was even more striking than among the boys, and the picture for family support in college among the girls was much closer to that among the boys than was true in 1950, where the differences between the sexes were considerably greater.

The high-ability students planning to get jobs were asked if they would change their plans and attend college if they had more money. Approximately 50 per cent of the males and 45 per cent of the females said they would attend college if they had more money. These proportions were somewhat lower than the figures found in 1950--60 per cent for the males and 56 per cent for the females. The proportions of job-seeking high-ability students who said they would change their plans and attend college if they had more money were considerably higher than the proportions found among the total population of job seekers, where this proportion was approximately 25 per cent.

Of the high-ability students who said they would change their plans and attend college if they had more money, approximately two-thirds of the boys and a half of the girls indicated they would need enough money for all of their expenses at college. Approximately 30 per cent of the boys and almost a half of the girls indicated that if they were to attend college they would need enough money to pay for about half of their expenses. Less than 5 per cent said that the amount of money needed would be only enough to pay less than half of their expenses at college. In 1950 about one-third of the boys said they would need enough to pay all of their expenses, as compared with about one-half of the girls. In 1961 the proportion of boys indicating they needed enough to pay all of their expenses increased from one-half to approximately two-thirds of the group. It appears that many of the 1961 high-ability students resembling those who did not attend college for financial reasons in 1950 did attend in 1961, and the few who remained for whom financial reasons were an important factor in not attending college were those whose financial needs were great.

Approximately 10 per cent of the high-ability students who were planning to seek jobs said that they could easily afford to attend college if they wished. Fifteen per cent indicated they could barely afford to attend if they wished; approximately 40 per cent said that attending college would involve many sacrifices; and over 40 per cent said they could not afford it. The proportion indicating they could easily afford college--10 per cent--was similar to that found in 1950. Fewer students in 1961--15 per cent--indicated they could barely afford college than in 1950--25 per cent. A somewhat larger proportion in 1961 indicated they could not afford college as compared with 1950. These figures indicate that for many high-ability students, lack of money was not the principal factor in their decision not to attend college.

Family's Attitude Toward College

Of the high-ability students planning to attend college, over 80 per cent stated that their parents wanted them to attend college, and 15 per cent said their parents insisted that they go. A slightly smaller proportion of boys and girls from the farm than from other areas indicated their parents insisted that they attend college. Approximately 5 per cent of the college-bound students indicated their parents were indifferent. These reported attitudes on the part of the families of these high-ability students were similar to those reported by the total population of college-bound students, and were also similar to attitudes reported by the high-ability college-bound students in 1950.

Practically none of the high-ability students who planned to get jobs from the non-farm and farm areas reported that their parents insisted that they attend college. However, this family attitude was reported by a small proportion of the metropolitan students seeking jobs. Eight per cent of the male job seekers and 2 per cent of the female job seekers were apparently planning to get jobs in spite of their parents' insistence that they attend college. Sixty-five per cent of the metropolitan and non-farm males and 45 per cent of the farm males who planned to get jobs indicated that their families wanted them to attend college. Among the girls these figures were 40 per cent of the metropolitan and non-farm girls and 32 per cent for the farm girls. These proportions were considerably higher than was found among the total population of job seekers. The families of these high-ability job seekers appeared to be much more interested in their children attending college than was true for the parents of the average students who planned to get a job. Attitudes on the part of parents appeared to be an important factor determining whether or not a high-ability student attended college. At the same time, however, over half of the students who planned not to attend college but to get jobs reported that their parents wanted them to go to college. Almost none of the boys said their parents did not want them to attend college, although 7 per cent of the girls who planned to seek jobs did report this attitude on the part of their parents.

Influence of Marriage on Plans

Only 2 per cent of the high-ability college-bound males and 4 per cent of the high-ability college-bound females indicated that marriage had influenced their plans for the following year, and practically none of these students planned to get married within the next two years. On the other hand, approximately 10 per cent of the males seeking jobs and 28 per cent of the females said that marriage was an important determinant of their post-high school plans. These proportions were slightly higher than those reported by the entire population of job-seekers. Two per cent of the males and 5 per cent of the females planning to get jobs indicated they planned to be married shortly after graduation. Another 2 per cent of the males and 10 per cent of the females planned to be married during the year following the one in which they graduated from high school. Marriage, therefore, appeared to be a rather small deterrent to college attendance among the boys, but is somewhat more important for the girls. It is, perhaps, an important factor for somewhere between 15 and 25 per cent of the high-ability girls who did not plan to attend college.

Chapter 12

PLANS OF ABLE STUDENTS FROM WORKMEN'S HOMES

One method used in the 1950 investigation to observe the effect of social and cultural conditions on college attendance consisted of holding constant ability and economic background, and studying the relationships between other factors and college attendance. Economic level was held constant by selecting only students who came from workmen's homes--those whose fathers were either skilled or unskilled workers. Variation in ability was minimized by including only students who had scores of 120 or above on the ACE, which placed them in the top 18 per cent of high school seniors. By selecting a similar sample from the 1961 class it was possible to describe the 1961 sample and also to compare it with the similar group in 1950.

College Plans

In 1961 there were 1856 students from the metropolitan and non-farm areas whose fathers were skilled workmen or factory workers and who scored above 45 on the MSAT (Students from the upper 17 per cent of all Minnesota seniors). Thirteen hundred and sixty-nine students, or 71 per cent, of this sample planned to attend college. In 1950, this percentage was 56 per cent, 530 students out of the total sample of 940. As presented in Chapter 6, the total proportion of all high-ability students planning to attend college increased by 14 percentage points, from 67 per cent to 81 per cent. The proportions of high-ability students from workmen's homes going to college increased at approximately the same rate as that for the total sample of high-ability students, and three times as fast as the 5 per cent increase in college attendance for the entire population of high school seniors.

The proportions of high ability students from workmen's homes with plans to attend college are shown by sex and residence area for both survey years in Table 12-1. The largest increase was shown by the non-farm boys, where 57 per cent planned to attend college in 1950 as compared with 80 per cent in 1961.

Aptitude and Achievement

Although this sample of students was highly selected on the basis of scholastic aptitude test scores--all of them achieving in the top 17 per cent of the population with a raw score of 45 or above--there was still for both sexes a significant difference between the mean scores achieved by those planning on college and those with other plans. Among the males, those planning on college obtained a mean of 53.38 as compared with their

Table 12-1

Comparison of Percentages of High Ability Students From Workmen's Homes Who Planned to Attend College in 1950 and 1961

Category	1950 Total Sample N	1950 Attend College N	1950 Attend College %	1961 Total Sample N	1961 Attend College N	1961 Attend College %
Male						
Metropolitan	203	146	71.92	436	350	80.28
Non-Farm	271	154	56.83	397	318	80.10
Total Male	474	300	63.29	833	668	80.19
Female						
Metropolitan	205	100	48.78	543	372	68.51
Non-Farm	261	130	49.81	540	329	60.93
Total Female	466	230	49.36	1083	701	64.73
Total	940	530	56.38	1856	1369	71.45

non-college counterparts, who achieved a mean score of 50.45. Female college planners achieved a mean score of 54.47 as compared with the mean of the non-college group, 51.79. Even among this relatively homogeneous group, differences in ability were related to plans to attend college, differences similar to those found in the 1950 study. Considerably larger differences were found in this high-ability group in the high school achievement records of the college and the non-college groups. The mean high school percentile ranks for the college and non-college groups are shown in Table 12-2. Large differences occurred for both sexes, but they were considerably greater for the boys. The figures suggest that the increase among those going to college consisted of students with better high school records.

Many of these high-ability students from lower socio-economic backgrounds achieved their lower grades in high school because of a lack of academic interest, and this lack of interest would result in a decision not to continue academic work in a college or university.

Table 12-2

Comparison of Mean High School Percentile Rank for College and Non-College-Bound High-Ability Students from Workmen's Homes in 1950 and 1961

	1950		1961	
Category	N	Mean Percentile HSR	N	Mean Percentile HSR
Male				
College	300	76.00	522	78.51
Non-College	174	55.71	186	56.56
Female				
College	230	85.57	649	85.06
Non-College	236	80.67	375	76.27
Total				
College	530	80.15	1171	82.14
Non-College	410	70.08	561	69.74
Total N	940		1732	

Father's Occupation

Even in a group that was homogeneous in father's occupation, differences were still found between those of students who went to college and those who did not. As in 1950, in 1961 these differences were significant only among the metropolitan females, where 76 per cent of those going to college came from homes of skilled tradesmen as compared with 64 per cent of those not planning on college. Twenty-four per cent of the metropolitan girls planning on college came from homes of factory workers as compared with 36 per cent of those not planning on college.

Parental Education

The educational level attained by both the father and the mother were significantly related to the plans of high-ability students from workmen's homes for non-farm boys and girls from all areas. Significant differences in father's education which were found among students with different post-high school plans in 1950 were not found for the male metropolitan students in 1961. This change is consistent with the general trend found among metropolitan males for socio-economic factors to be less important determiners of college education in 1961 as compared with 1950. The relationship between father's occupation and post-high school plans for the other groups was similar to that found in 1950 except that the over-all level of father's education had increased since 1950. Thirty-two per cent of the non-farm males planning to attend college had fathers who had completed no more than an eighth-grade education as compared with 62 per cent for those not planning on college. Twelve per cent of those planning to attend college had fathers with some college background, as compared with only 2 per cent of those not planning on college. For the non-farm girls, 35 per cent of the college-bound, as compared with 50 per cent of those not attending college, had fathers who had completed the eighth grade or less. Eight per cent of the college-bound and 5 per cent of the girls not planning on college had fathers with some college training.

Similar differences were found between the educational levels attained by the mothers of these students. For the non-farm males, 15 per cent of the college-bound students had mothers with no more than an eighth-grade education as compared with 27 per cent of those with other plans. Twenty-nine per cent of those bound for college had mothers with some college education as compared with 12 per cent of those not planning to attend. For the non-farm girls, 16 per cent of the college-bound as compared with 27 per cent of the non-college students had mothers with an eighth-grade education or less, and for those with some college training, the proportions were 25 per cent for the college-bound and 11 per cent for those not planning on college.

Family Income

No significant differences were found between college-bound students and those with other plans on the reported adequacy of their family income. Approximately 60 per cent described their family's income as "comfortable but not well-to-do" and approximately a quarter of them said that they had "all the necessities but not many luxuries." These proportions were very similar to those found in 1950, and in 1950 as in 1961 there were no significant differences between students with differing post-high school plans.

Size of Home

College-bound students in this group tended to come from families with four or less living in the home, and students with other plans to come from families containing nine or more. This difference was significant only in the case of the non-farm females where, for example, 24 per cent of those planning to attend college had three people living in their homes compared to 14 per cent with other plans. On the other hand, of the college planning non-farm girls, 4 per cent had nine or more people in their homes, compared to 10 per cent of those who had other plans. The relationship of the number of people in the home to college attendance was slight, and differences were found only at the extremes of the distribution.

No relationship was found between either the total number of rooms reported in the home and college attendance, or whether or not the student reported he had a bedroom to himself.

A small relationship was found between college attendance and whether or not the parents of this group of high-ability students owned their own homes. It was significant only for the metropolitan females where 84 per cent of those reporting home ownership planned to attend college as compared with 74 per cent with other plans.

Number of Books in Homes

No significant differences in the number of books the students reported to be in their homes were found between those planning to attend college and those with other plans. About a third of the high-ability students from workmen's homes reported over one hundred books in their homes, and about a quarter reported between fifty and one hundred. Approximately 20 per cent reported between 25 and 50, and slightly over 10 per cent reported between ten and 25. About 3 per cent reported that there were less than ten books in their homes. In 1950, a consistent and significant difference between students planning to attend college and those not planning to attend college was found on this basis of the number of books in their homes. No such differences were found for the 1961 samples.

Attitudes Toward College

Forty-three per cent of the high-ability children of skilled tradesmen and factory workers who were not going to college said that they would change their plans and attend if they had more money. Fifty-seven per cent said they would not. In 1950, 53 per cent said they would change their plans and go to college if they had more financial support. Thus the proportion of these able students not attending college for lack of finances has significantly (.01 level) decreased. The real change, however, has taken plance in the total numbers involved rather than in the proportions. In 1950, 940 high-ability students were from workmen's homes, and within this group were 165 students who said they would change their plans and attend college if they had more money. In 1961 this total group consisted of 1751 students, but because a higher proportion of them went to college, the total number who said that they would change their plans and attend college if they had more money was only slightly higher than that in 1950--196 students, 63 boys and 133 girls.

Of the students who said they would go to college if they had more money, about a half of them said they would need enough to pay all of their expenses, and about a half said they would need enough to pay about a half of their expenses. Less than 2 per cent said they would need only enough to pay less than half of their college expenses. Of the students who were not planning to attend college, approximately 10 per cent said they could easily afford college if they wished to attend. Approximately 15 per cent said they could barely afford college, and 40 per cent said they could afford it but it would involve many sacrifices. Approximately 35 per cent said they could not afford college. These proportions were similar to those found in 1950, and again indicate that more than financial factors are involved in reasons for not attending college.

A large proportion of the high-ability students from workingmen's homes who were not planning to go immediately on to college did plan to attend at some later time. There were large sex and residence area differences in the proportions planning to attend college at a later date. Among the boys, approximately 50 per cent of those from the metropolitan area and 35 per cent of those from the non-farm areas reported plans for attending college after a year or more. Among the girls these proportions were 25 per cent from the metropolitan area and 12 per cent from the non-farm area.

Family Attitudes Toward College

Over 80 per cent of the college-bound students reported that their parents wanted them to attend college. An additional 13 per cent of the boys and 4 per cent of the girls reported that their parents insisted that they attend college. None of the male students and only 1 per cent of the female students not going to college reported that their parents insisted that they go, but approximately 65 per cent of these boys and 50 per cent of the girls reported that their parents wanted them to attend. About a third of the boys and over two-fifths of the girls who were not planning to attend college reported their parents were indifferent to their going to college. About 5 per cent of the girls' parents did not want them to attend college. The proportions of college-bound students reporting their parents were indifferent as to whether or not they attended college were less than 5 per cent for the boys and about 10 per cent for the girls. Parental attitudes toward college were important in deciding whether or not these high-ability students from workingmen's homes attended college, but they were not all-important, as evidenced by the fact that two-thirds of the boys and one-half of the girls who were not planning to attend college reported that their parents wanted them to attend.

Effect of Marriage on Post-High School Plans

None of the boys with any types of plans and only about 5 per cent of the girls who were not planning to attend college said that they planned to be married shortly after high school graduation. Approximately 4 per cent of the metropolitan males who were not planning to attend college said they planned to get married within two years of graduation, and about 6 per cent of the girls who were not planning to attend college said they planned to get married within two years. The rest of these students had either no definite plans for marriage or at least were not planning on marriage for several years. Marriage does not appear to be an important deterrent in keeping high-ability students from lower socio-economic backgrounds from attending college.

Chapter 13

GIRLS WHO PLANNED TO ENTER NURSING

Of the 22,550 girls who reported their post-high school plans, 1,594, or 7 per cent, planned to enter nursing. Other girls in the sample planned to enter nursing through a four-year college program and gave "college attendance" as their post-high school plan. They were not included in this nursing group. The nursing group consisted primarily of girls who planned without college preparation to enter a school of nursing, either to train for a RN certificate or to train in practical nursing.

The proportions entering nursing varied slightly according to residence area, with 5 per cent of the metropolitan girls and 8 per cent of the farm and non-farm girls making these plans. The proportion of girls entering nursing increased 1 per cent since 1950, and this 1 per cent increase occurred equally in each of the residence areas.

Ability and Achievement

The mean scholastic aptitude test score of girls going into nursing placed them midway between the means of those planning to get jobs and those planning to attend college. The mean score obtained by these girls planning on nursing (33.06) fell at the 65th percentile for high school students and at the 37th percentile for college-bound students in this state. The mean ability level was the same for girls from each of the three residence areas.

The girls planning on nursing varied considerably from one area to another on high school achievement as measured by mean high school ranks. The metropolitan girls in this group had a mean high school rank of 56.7, the non-farm group 61.5, and the farm group, 66.7. The mean high school rank for farm girls entering nursing is 10 percentile points above that for prospective nurses from the metropolitan areas. The mean high school rank of girls entering nursing fell about midway between those of girls planning to get jobs and those planning to attend college. For example, among the total group surveyed, the mean high school rank for girls entering nursing was 61.8, as compared with 47.3 for those who planned to seek employment and 72.1 for those planning to attend college.

Age

The median age at the time they were surveyed was 17.55 for girls planning to enter nursing, and the percentages of these girls who were 16, 17, and 18 years of age were similar to those obtained for the entire senior class. There were no significant differences between the ages of girls planning to enter nursing and those with other plans and no significant differences in the ages of girls who planned to enter nursing in the three residence areas.

Father's Occupation

Almost one-half of the girls planning to enter nursing--49 per cent from the metropolitan area and 43 per cent from the non-farm area--were from families where the father was either a laborer or a skilled tradesman. In 1950, 56 per cent of the metropolitan girls planning on entering nursing came from families where the father was in this type of occupation, and 42 per cent of the non-farm group had fathers in this category. In the present study, 17 per cent of the metropolitan girls planning on nursing came from families where the father was in a professional or managerial position, and 27 per cent of the non-farm nursing group fell into this category. Comparable percentages were found in the 1950 study. Among the girls planning on nursing who lived on farms, a larger proportion had fathers actually engaged in farming than was true for any other type of post-high school plan. With the exception of the farm girls, the paternal occupation of girls planning on nursing closely resembled those of students attending business and trade schools, and to some extent, girls who seek employment.

Education of Parents

The median educational level achieved by the fathers of the girls planning to enter nursing was graduation from high school for those from the metropolitan area, some high school for the non-farm area, and completion of the eighth grade for those from farms. Nineteen per cent of the girls from the metropolitan area, 15 per cent from the non-farm area, and 3 per cent from the farm area had fathers with some college training. Twenty-two per cent of the girls from the metropolitan area, 37 per cent from the non-farm area, and 66 per cent from the farm had fathers whose formal education had not gone beyond the eighth grade.

The median education of the mothers of girls entering nursing was graduation from high school for the metropolitan and non-farm groups and some high school for those from farms. Approximately 18 per cent of the girls from each of the regions had mothers with some college training. In 1950, these college figures were 19 per cent for the metropolitan group, 20 per cent for the non-farm, and 24 per cent for the farm group. Although the overall proportion of students with college-trained mothers increased slightly during this 11-year period, the proportion of girls going into nursing with college-trained mothers significantly decreased during this time. The proportions with college-trained fathers, on the other hand, increased as compared with the 1950 figures.

Family Income

In the same manner that the level of parental education for these girls planning to enter nursing was between the educational levels for those planning on jobs and those planning to enter college, the type and level of family income for these girls also fell between these two groups. Fifty-five per cent of girls planning to enter nursing came from homes where wages were the chief source of income, as compared with 35 per cent of the college-bound girls and 65 per cent of the job-seeking girls in the metropolitan area. Family income was derived chiefly from salary for 30 per cent of these girls from the non-farm and metropolitan areas as compared with 38 per cent of the college-planning girls and 20 per cent of the job-seeking girls from these areas. Only a small change in type of income took place for these girls over the 11-year period, and this change showed a slight tendency for a higher percentage of girls to come from homes of wage earners and a slight decrease in the number from salary earners' homes.

Twenty-one per cent of the metropolitan and non-farm and 29 per cent of the farm girls said their homes had the necessities but not many luxuries. As was true regarding parental educational level and type of family income, these girls fell between those planning on college and those planning on jobs. In terms of socio-economic level, the girls planning on nursing tended to come from homes higher on the socio-economic scale than girls planning on jobs, but not as high as the homes of the girls planning on college.

Size of Home

There was little relationship between the size of the home of girls and whether or not they planned on nursing. Nursing-bound girls tended to come from smaller homes than the college-bound girls in the metropolitan areas, while in the farm area their homes were much larger than those of students making other non-collegiate plans, and about equal in size to those of college-bound students.

Cultural Status of Home

Three per cent of the metropolitan girls, 3 per cent of the non-farm, and 6 per cent of the farm girls who were planning on entering nursing reported that there were fewer than ten books in their homes. Twenty-seven per cent of the metropolitan, 24 per cent of the non-farm, and 19 per cent of the farm girls entering nursing reported that there were over one hundred books in their homes. In 1950, 31 per cent of the metropolitan girls, 18 per cent of the non-farm, and 13 per cent of the farm girls had over one hundred books in their homes. The proportions reporting over 100 books in their home, therefore, has decreased in the metropolitan area and increased in the non-farm and farm areas. The median number of books in the home for these girls entering nursing was between 50 and 100 books for the metropolitan and non-farm areas, and between 25 and 50 books in the farm area.

Significant differences also were found among prospective nurses between the areas on the basis of magazines available in homes. The *Reader's Digest* was subscribed to by 62 per cent of the families of the metropolitan girls, 58 per cent of the non-farm, and 49 per cent of the farm girls. *Time* magazine was found in the homes of 19 per cent of the metropolitan, 15 per cent of the non-farm, and 6 per cent of the farm girls. Similar differences were found for many other types of magazines. Three different farm magazines were found in over three-fourths of the homes of farm girls entering nursing. The families of girls entering nursing less often subscribed to magazines than did those of girls entering college, but more often than did the families of girls with other types of plans.

Girls entering nursing were more likely to have families who were members of the PTA than were students with any other types of plans except those who were planning on college. Sixty-one per cent of the metropolitan girls entering nursing had parents who were members of the PTA as compared with 43 per cent of those who planned to get jobs and 74 per cent of those who planned to attend college. Among the farm girls, 24 per cent of those entering nursing indicated their parents were members of the Farm Bureau, as compared with 29 per cent of those bound for college and 18 per cent of those with other types of plans. Girls entering nursing also tended in larger proportions to have parents who were members of church organizations than those with any other plan except for the college-bound students. Girls entering nursing, then, came from homes with a lower cultural status than did the college-bound girls, but from homes that ranked higher on these indices of cultural status than did students seeking employment or planning to attend other types of schools.

Educational Background and Plans

Approximately 60 per cent of the metropolitan and non-farm, and 52 per cent of the farm girls planning to enter nursing took a college-preparatory curriculum in high school. This represents an increase of 5 percentage points in each area over the percentage of nursing girls who took a college-preparatory curriculum in 1950. Nine per cent of the girls entering nursing took a commercial course in high school, and this percentage was less than the 12 per cent who took a commercial course in 1950. The proportion taking a general course also decreased somewhat in 1961 as compared with 1950. The reasons given for taking their curriculum were that it fitted vocational plans the best, and that it was the most interesting. Almost three-fourths checked the reason "Fitted vocational plans best," and about a quarter said that it was the "most interesting." Twenty-two per cent checked "parent's advice" as an important reason, and 20 per cent checked "counselor's advice." The proportion giving advice of a counselor as a reason was over twice that of 1950.

The reason most often given as to why they were planning to enter a school of nursing was to prepare for a vocation. Girls entering nursing checked "to make more money" as a reason for their entering nursing less often than did students who planned any other type of post-high school activity. Girls did not enter nursing with the idea of making much money. They also less often checked the desire for independence than did any students except those who planned on college. Seven per cent of the girls entering nursing said they planned to attend college at a later date. Three per cent said they planned to attend after one year, and 3 per cent planned to attend after three years.

Attitude Towards College

Fifteen per cent of the girls planning to enter nursing said they would change their mind and attend college if they had more money. This proportion was lower than that found for girls planning to enter other types of schools, such as business or trade school, and considerably lower than that for girls planning to seek jobs. In 1950 the proportion who said they would attend college if it were not for financial problems was over twice as high--almost 40 per cent--as in the present study. Far fewer girls seemed to be entering nursing as a less desirable alternative to college in 1961 than was true in 1950.

Thirty-six per cent of the girls who said they would go if they had more adequate financing said they would need enough money to pay all of their expenses if they were to attend college, and 56 per cent said they would need enough to pay about half of their expenses. In 1950 the proportion indicating they would need enough for all of their college expenses was 31 per cent, and this change is perhaps due to the increase in students attending college in 1961, with those not going likely to need more support. This hypothesis is given further support by the number of girls indicating they could easily afford to go to college if they wished to, which was reported by 21 per cent of the metropolitan girls, 17 per cent of the non-farm, and 11 per cent of the farm girls planning on nursing.

In 1950 this proportion was 18 per cent of the metropolitan and non-farm girls, and 24 per cent of the farm girls. About 25 per cent of these nursing-bound girls said they could not afford college, and this proportion is similar to that found in 1950. Fewer girls are now entering nursing who would attend college if they could afford it, but a higher proportion of the girls entering nursing would have a difficult time attending college if they desired than was true in 1950.

Family Attitude Toward College

Sixty-eight per cent of the metropolitan and farm girls and 76 per cent of the non-farm girls entering nursing said their parents wanted them to attend college. Approximately a quarter of the metropolitan and farm girls and a fifth of the non-farm girls entering nursing said their parents were indifferent as to whether or not they attended college. There was no alternative in this item for the girls to check whether their parents wanted them to attend college or some other type of training program, such as nursing, so it is not possible to tell what proportion of these girls were entering nursing when their parents wanted them to attend college. It is apparent, however, that at least for some girls entering nursing, their parents would have preferred that they had attended college.

Influence of Marriage Plans

Ten per cent of the girls who planned to enter nursing said that marriage had influenced their plans, and this percentage was the same across all regions. This percentage is lower than that for all other plans except those who were college bound. As for all plan groups except those who planned on college, the percentages ran from 15 to 25 per cent. In response to the question, "When, in your present plans, are you thinking of marriage?" almost none of them were presently married, and almost none of them planned to get married immediately upon graduation. Only 2 per cent planned on marriage during the year following the one in which they graduated from high school. About 40 per cent said they were not planning on marriage for a few years, 50 per cent could not say, and 8 per cent were not planning on marriage at all. The proportion saying they could not say when they planned to be married or had made no particular marriage plans, was higher than that for all groups except those planning on college. The proportion planning to get married "in a few years" was higher than that for those who planned on college. Those who were going into nursing seemed to have more plans for marriage in a few years than did those who went to college. Perhaps one of the reasons these girls decided upon a three-year regular nursing program rather than a college degree was the fact that it could be done in three years rather than four, since they seemed to have more definite plans for marriage. Another explanation, of course, may be that girls going into nursing tend to come from a slightly lower socio-economic level than those planning on college, and within these socio-economic levels is a tendency to marry at an earlier age.

Chapter 14

GIRLS WHO PLANNED TO ATTEND BUSINESS SCHOOL

Girls planning to attend a business school numbered 1,655, or 7 per cent, of the senior girls who completed questionnaires. Although the actual number increased from 1,015 in 1950 to 1,655 in 1961, the proportion of girls planning on business school dropped slightly from 8 per cent to 7 per cent. Differences among residence areas were as follows: 9 per cent of the farm girls, 8 per cent of the non-farm girls and 6 per cent of those from the metropolitan areas. While the proportions of students planning on college and trade schools have increased significantly over the past decade, the proportion planning to attend business school has decrease slightly. A total of 368, or 2 per cent, of the boys planned to attend business school, a proportion similar to that reported in 1950. Because the proportion of men planning on business school represents only a small share of the total boys graduating, a detailed description of the business school-bound students will be provided only for the women.

Age

The median age of girls planning on business school was 17.6 years, and this figure did not vary significantly from those with most other types of plans. Eighty-five per cent were 17 years old, 11 per cent were 18, and 2 per cent were 16, at the time the questionnaires were completed.

Ability and Achievement

The mean ability level of girls planning on business school varied slightly according to residence area. The mean MSAT score for these girls from the metropolitan area was 26.17 from the farm area, 27.38, and from the non-farm area, 28.18. Thus in terms of average scholastic aptitude they were brightest from the non-farm area and least bright from the metropolitan areas. These scores placed them near the 29th percentile for students who enter college in Minnesota and the 50th percentile for high school seniors. The mean scores fell well below those for college-bound girls, slightly below the means of girls planning to enter nursing, and above the means for girls planning to attend trade school or seek employment.

The mean high school rank for these girls varied considerably by residence area. The mean high school rank for the girls from the metropolitan area was 47.6, from the non-farm area, 53.6, and from the farm area, 57.6. Girls with the best high school records tended to come from the farm, and with poorer high school records from the metropolitan areas. The pattern was different from that recorded for ability levels. While the mean ability level for the farm girls planning on business school was below that of those from the non-farm area, the farm girls achieved significantly higher records in high school. Again the mean high school rank for girls planning on business college fell below those of college and nursing-bound students and above those planning on trade school and employment.

Occupation of Father

Fourteen per cent of business school-bound girls from the metropolitan area had fathers who were in professional or managerial occupations, as did 23 per cent of the girls from the non-farm area. Twenty-one per cent from the metropolitan area and 24 per cent from the non-farm area had fathers who were laborers or factory workers. Thirty-six per cent of the metropolitan girls and 25 per cent of the non-farm girls had fathers in the skilled trades. The non-farm girls attending business school tended to come from a higher socio-economic level than did those from the metropolitan area. Girls planning to attend business school tended to have fathers who were in occupations higher on the occupational scale than those who sought employment, but considerably lower than did those planning to attend college and slightly lower than did those planning to enter nursing. Over the past 11 years proportionately fewer girls with fathers who owned or managed a business attended business school, and more of those with fathers in the skilled trades.

Education of Parents

The median paternal educational level for girls planning to attend business school was graduation from high school for the metropolitan group, some high school education for the non-farm group, and completion of the eighth grade for the farm group. These medians resembled the medians of fathers for the entire sample of students from each of the residence areas. Twenty-five per cent from the metropolitan area, 45 per cent from the non-farm area, and 66 per cent of girls bound for business school from the farm area had fathers who had had no more than an eighth-grade education. The median education of the mothers of these girls was graduation from high school for the metropolitan and non-farm groups, and some high school for the farm group. Fathers and mothers of these girls tended to have less education than those of girls planning to attend college, but more than those of students planning to seek employment. Few of these girls had parents who had attended business school, and there was no more tendency for the daughter of a parent who had attended business school to attend business school herself than to make other types of plans. In fact, there was a slight tendency for girls whose mothers had attended business school to be more likely to attend college than to attend business school, and in the metropolitan area girls with fathers who attended business school were as likely to attend a trade school as they were to attend business school. The parental educational levels of these girls tended to be slightly above those for girls seeking employment from the metropolitan area, considerably above those for girls seeking employment in the non-farm and farm areas, and similar to those of the few girls planning to attend trade school.

Family Income

Sixty-two per cent of the metropolitan girls planning on business school came from families where wages were the source of income and 23 per cent came from families who were salaried. For the non-farm group these proportions were 51 and 23 per cent. The trend over the past 11 years has been for girls planning to attend business school to come in increasing proportions from families where wages rather than salaries were the chief source of income. Sixty-two per cent of girls planning on business school reported that they came from "comfortable but not well-to-do" homes. An additional 22 per cent said that their family's income was enough to provide the necessities but not many luxuries. The family incomes of these girls planning to attend business schools appeared to be similar to, but slightly above, the incomes of the families of students planning to seek employment, and substantially below those of college-bound students. Business school girls reported slightly less adequate family incomes than did girls with similar plans in 1950.

Size of Home

Metropolitan girls planning on business school tended to come from homes with only 3, 4, or 5 rooms less often than did girls planning to seek employment. They came from homes with five to seven rooms more often than did girls planning on college, and less often came from homes with eight or more rooms than did college-bound girls. Among non-farm girls, business-school planners less often than college-bound girls came from larger homes with eight or more rooms. Those from the farm came from homes as large as did those who were planning on college, but more often came from these larger homes with eight or more rooms than did girls who were seeking jobs. Also they reported more often that they had a bedroom to themselves than did girls planning to seek employment, and more often than the girls with any other plan except college. No differences in the number of people living in their homes were reported by girls with business school plans and by those who planned on other types of post-high school activities.

Cultural Status of Home

Girls planning on business school reported more books in their home than did girls planning to seek employment, and fewer books than did those who planned to go to college. For example, 17 per cent of the metropolitan business-school girls reported fewer than 25 books in the home as compared with 23 per cent of those seeking jobs and 7 per cent of those going to college. These differences were constant for all residence areas. In each of the areas the number of books reported in the business school girls' homes, although falling between the numbers reported by job-seeking and college-bound students, was much closer to those of the job seekers. A quarter of the metropolitan girls and 14 per cent of the non-farm and farm girls reported more than one hundred books, and these percentages were almost identical to those found for business school-bound girls in 1950.

For most magazines that the family subscribed to or regularly bought, the families of girls going to business school were more likely to take a particular magazine than those of students who were planning to seek employment, and less likely to take it than those of students bound for college. In most cases the proportions taking a particular magazine were slightly above those of the job seekers and considerably below those of the college planners. For example, in the metropolitan area, Time magazine was taken by 14 per cent of the families of girls going to business school, as compared to 13 per cent for the job seekers and 31 per cent for the college planners. For Life magazine, the same proportions were 35 per cent, 32 per cent, and 44 per cent, respectively. These differences were similar across the residence areas, although in almost all cases a higher proportion of metropolitan families took the magazines than non-farm families, and more non-farm families than farm families. These differences were not present for magazines such as True or Argosy, and also were not present among the farm magazines.

For most types of parental organizations, smaller proportions of business-school parents belonged to particular organizations than did families of girls who planned on college, and larger proportions than those who planned to seek employment. Forty-seven per cent of non-farm girls going to business school reported their parents belong to the PTA as compared with 35 per cent for the job-seeking students and 57 per cent for the college-bound girls. For church organizations these proportions were 56 per cent, 48 per cent, and 69 per cent respectively. Organizations where these differences did not occur included labor unions and veteran's organizations.

> In cultural status then, homes of the girls planning to attend business school fell between those of girls planning on college and those of girls planning to seek employment, but were closer to those of students planning to seek employment.

Reasons for Plans

Approximately 60 per cent of the girls planning on business school took a commercial curriculum in high school, 25 per cent took a general course, and 10 per cent a college-preparatory course. As would be expected, this was a larger proportion taking a commercial course than was true of girls with any other plan, but it was not much higher than the 56 per cent of girls planning to get jobs who took this curriculum. The reason most often given for taking this course was that it best fitted their vocational plans. This response was checked by 60 per cent of these girls. Thirty per cent said this was the course that they found most interesting, and 20 per cent said that they found they did their best work in this course. Twenty-two per cent said they were influenced by their parents' advice, a reason checked more often by these girls than by those with any other post-high school plan except college.

The reason most often given for the decision to attend business school was to prepare for a vocation, given by 73 per cent of the girls. The reason next most often checked was that it would enable them to make more money and there were large regional differences in responses to this item. It was checked by 28 per cent of the metropolitan, 34 per cent of the non-farm, and 40 per cent of the farm girls bound for business school.

Attitudes Toward College

About 20 per cent of the girls from each of the residence areas planning to attend business school said they would change their plans and attend college if they had more money. In 1950 these percentages were 30 per cent for the metropolitan girls and 46 per cent for the non-farm and farm girls. The proportion of girls going to business school for whom this is only a less desirable alternative because they cannot afford college is thus considerably smaller than in 1950. Of those in the non-farm area who said they would attend college if they had more money, about 39 per cent said they would need enough to pay all of their expenses at college, about 54 per cent said they would need enough money for about half of their expenses, and about 8 per cent needed enough to pay less than half of their expenses. These figures were relatively constant across residence areas. In 1950 these figures were 31 per cent saying they needed enough money for all of their expenses and 62 per cent enough for about one-half of their expenses. These figures suggest that fewer of these business school-bound girls are not attending college because of financial reasons than was true in 1950, but for the smaller group not able to attend college, greater financial assistance would now be needed to enable them to attend.

Twenty-five per cent of the metropolitan and 13 per cent of the non-farm and farm girls planning to attend business school said they could easily afford college if they wished to go. Twenty-one per cent of the metropolitan and 31 per cent of the non-farm and farm girls said they could not afford college. Financial factors appeared more often a determinant in a girl's planning to attend business school rather than to attend college if she came from a non-farm or farm area rather than from a metropolitan area, where the girls were more often financially able to go to college but decided otherwise.

Nine per cent of the metropolitan girls who planned to attend a business school said they planned to go to college at a later date. Five per cent planned to attend college after an interval of one year and 2 per cent planned college after two years. Among these girls from the farm and the non-farm areas, 4 per cent planned to go to college at some later time.

Family Attitude Toward College

One per cent of the girls going to business school said that their parents insisted that they go to college. Another 56 per cent of the metropolitan and non-farm groups and 50 per cent of those from the farm said their parents wanted them to attend college. Forty per cent of these girls from each of the areas said that their parents were indifferent about their attending college, and 3 per cent of the metropolitan and non-farm and 7 per cent of the farm girls said their parents did not want them to go to college. A higher proportion of these girls reported that their parents wanted them to attend college than girls with any other type of plan, except, of course, those who were in fact going to college. Girls going to business school who came from farms felt their parents less often wanted them to go to college than girls from any of the other areas, but even among these farm girls, 50 per cent of them said their parents would have preferred them to go to college.

Influence of Marriage Upon Plans

Twenty-one per cent of the metropolitan girls planning on business school said that marriage or the early prospect of marriage influenced their plans for the coming year. This was considerably higher than the 6 per cent of the college-bound girls but less than the 26 per cent of those planning to get jobs. Fifteen per cent of the non-farm girls and farm girls planning on business school answered this item affirmatively, as compared with 25 per cent of the girls planning on jobs and 5 per cent of those planning on college. Girls from the metropolitan area going to business school therefore had marriage plans more similar to those of girls getting jobs and less like those of girls going to college than did these girls from the farm and non-farm areas. Two per cent of the girls planning on business school planned to be married in the year they graduated from high school and 6 per cent planned to be married the following year. One per cent of the girls planning on college planned to get married the year following graduation, and 10 per cent who planned to seek jobs had these plans. Thus girls entering business school fall about halfway between these other two groups on immediacy of marriage plans.

Chapter 15

BOYS WHO PLANNED TO ATTEND TRADE SCHOOL

Of the 22,206 boys completing the questionnaire, 1,820 said they planned to attend trade school. This is more than double the 782 males who indicated this plan in 1950, although the actual proportion of male graduates planning to attend trade school increased only from 7 to 8 per cent during this period. In addition, 979 girls, 4 per cent of the female graduates, indicated plans to attend trade school, and this represents a large increase over the 1 per cent who so indicated in 1950. However, since so few of the girls planned to attend trade school, no detailed description of the characteristics of these girls will be provided here.

Aptitude and Achievement

The mean MSAT score for males planning to attend trade school (23.43) was similar to those of boys entering the service and planning to seek jobs. The mean high school rank for boys bound for trade school, 32.49, was somewhat higher than the means for those seeking jobs and entering military service. Thus, as compared with the males planning to seek employment, trade school-bound students were of similar ability but had significantly better high school records.

Age

The median age of males planning to attend trade school was 17.6 years at the time they filled out the questionnaire. They were similar in age to those planning to seek jobs, and were slightly older than those planning to attend college, although as has been mentioned before, age now has ceased to have any meaningful relation to post-high school plans.

Parental Occupation and Education

Thirty-five per cent of the metropolitan boys planning to attend trade school had fathers who were in the skilled trades, and this is a higher proportion than found among students with any other plan. Only 3 per cent had fathers in the professions, and 12 per cent had fathers who owned or operated businesses. The median educational level of the fathers of trade school-bound boys was graduation from high school for the metropolitan boys, some high school for non-farm boys, and an eighth-grade education for the fathers of farm boys. The median educational level of the mothers of trade school-bound males was graduation from high school for the metropolitan and non-farm groups and some high school for the farm group. A greater proportion of mothers of these students had graduated from high school but had no further training than was true for students with other plans--fewer had either more education beyond high school or less than a high school education. In general, however, the occupational level of the fathers of these students and the educational levels of both parents were similar to those indicated by other males who planned to get jobs or to enter the military service.

Family Income

The sources of family income reported by this group of trade school-bound males tended to reflect the occupational classification of their fathers. They reported income from salaries, business profits, and professional fees less often than did most other groups, and income from wages more often. Sixty-four per cent of the metropolitan group and 48 per cent of the non-farm group reported family income from hourly or daily wages. Nine per cent of the metropolitan group and 18 per cent of the non-farm group reported their family income came from professional fees or profits. Fifty-four per cent of the metropolitan and non-farm boys reported family income to be "comfortable but not well-to-do," and 26 per cent said they have "all the necessities but not many luxuries." In both source and adequacy of family income, these students again were not significantly different from those seeking jobs or entering the military service. Trade school-bound boys more often came from lower socio-economic levels than did students selecting other types of post-high school education.

Attitudes Toward College

Twenty-two per cent of the students planning to attend a trade school said they would change their plans and attend college if they had more money. There were no significant differences between types of residence areas on the responses to this item. In this respect, students going to trade school differed from those getting jobs and joining the service, among whom about 30 per cent said they would attend college if they could afford to. This proportion of trade school-bound boys who said they would change their plans and attend college if they had more money is similar to the proportions among males planning on business school or other types of post-high school education. Fifteen per cent of students planning on trade school said they could easily afford college if they wished to attend, and another 25 per cent said they could barely afford college.

Three per cent of the boys who planned to attend trade school were apparently doing so in spite of their parents' objections in that they indicated their parents "insisted" that they go to college. Fifty-four per cent from the metropolitan and farm areas and 66 per cent of the non-farm students said their parents wanted them to attend college. Some, but perhaps not all, of these parents would have preferred to have their sons attend college rather than go to a trade school. Forty per cent of the metropolitan and farm students and 28 per cent of the non-farm students had parents who were reported to be indifferent as to whether or not they went to college.

Size of Home

There were no differences in the number of rooms in their homes reported by these students planning to attend trade school and those who planned either to seek employment or to go into the military service. When compared to students who planned to attend college, students who planned to attend trade school more often came from homes with six rooms or less, and less often from homes with nine or more rooms. For example, among the metropolitan students, 16 per cent of those bound for trade school came from five-room homes as compared with 12 per cent of those bound for college. On the other hand, 11 per cent of the college-bound metropolitan males came from homes with 11 rooms or more, as compared with 5 per cent of those going to trade school. These differences were quite similar among the metropolitan and non-farm groups, but were not found among students from the farm.

Similar differences were found in the numbers of persons with whom these students shared a bedroom. Fifty-nine per cent of the college-bound males from the metropolitan and non-farm areas had a bedroom to themselves, as compared with 50 per cent of those who intended to go to a trade school. Eleven per cent of the metropolitan and non-farm trade school-bound boys shared their bedroom with two others, as compared with only 6 per cent of the college-bound males. Again, these differences occurred only in the metropolitan and non-farm areas, not among boys from the farm. Although there was a slight tendency for more males planning on trade school from the metropolitan and non-farm areas to report eight or more persons living in the home as compared with those who were planning to attend college, in general there were few differences among students with various plans on the item dealing with the number of people in the home.

Books and Magazines in the Home

Four per cent of the metropolitan boys planning to attend trade schools reported fewer than ten books in their homes. Sixteen per cent reported 10 to 24 books, 26 per cent reported 25 to 49 books, 27 per cent between 50 and 100 books, and 25 per cent reported over 100 books. The proportion reporting less than ten books (4 per cent) was smaller than the proportion of job seekers (7 per cent) reporting their homes contained this small number of books. Otherwise, the number of books reported in the home among students planning to attend trade school did not differ from those who planned to seek jobs or enter the military service. Trade school-bound boys had considerably fewer books in their homes than did those bound for college. Thirty-eight per cent of the non-farm college-bound students reported over one hundred books in their home as compared with 17 per cent of those planning on trade school. Metropolitan trade-school boys had significantly more books in their home than did those who came from non-farm and farm areas.

For the majority of the magazines listed on the questionnaire, students going to trade school more often indicated that the listed magazine was taken in their home than did students who planned to get jobs upon graduation. Although trade-school boys reported these magazines more often than did those seeking jobs, they did not have nearly the number of magazines found in the home of the typical student who planned on college. For example, 49 per cent of the trade-school boys checked the Reader's Digest, as compared with 45 per cent of those seeking employment and 64 per cent of those going to college. Among the non-farm boys, Time was checked by 10 per cent of the trade-school group, as compared with 8 per cent who planned to seek employment and 21 per cent of those planning on college. Magazines such as Popular Mechanics and Popular Science were checked more often by trade school-bound boys than by boys with any other type of plan. True and Argosy were checked more often by those planning to seek employment than those planning on trade school.

Membership in Organizations

Trade school-bound students reported their parents belonged to the organizations listed on the questionnaire slightly more often than did students who planned to get jobs. They less often reported parental membership in most of the organizations than did college-bound students. Forty-one per cent of the metropolitan, 33 per cent of the non-farm, and 47 per cent of the farm boys planning on trade school reported their parents were members of the PTA as compared to about 34 per cent of those seeking jobs from each residence area. Sixty-four per cent of the college-bound students from the metropolitan area and 55 per cent from the non-farm and farm areas indicated their parents were members of the PTA. The parents of college-bound students were more likely to be members of all types of organizations except labor unions than were the parents of boys bound for trade school. Church organizations were more often checked by trade school boys than by boys who planned to get jobs in all residence areas. There were a number of differences between residence areas in terms of the organizations to which the parents of boys bound for trade school belonged. Those from the metropolitan areas more often had parents who belonged to labor unions and other organizations not listed on the questionnaire. The parents of the non-farm group were more likely to belong to veteran's organizations, neighborhood clubs, country clubs, and the AAA. Parents of the farm group were more likely to belong to the farm organization, the ladies' aid, and church organizations.

Marriage Plans

Marriage, or the early prospect of marriage, had influenced the plans of 9 per cent of the metropolitan, 9 per cent of the non-farm, and 6 per cent of the farm boys who planned to attend trade school. In each case these proportions were slightly less than among those who had planned to seek jobs and considerably larger than for those who planned to attend college. For over 90 per cent of the trade school-bound boys, then, marriage had not influenced their plans. One per cent of the trade school-bound boys from the non-farm area were already married, and 1 per cent from the metropolitan area were planning to marry within the coming year. Otherwise, almost none of the boys who were planning on attending trade school were thinking about marriage until at least the year following the one in which they graduated from high school. Even during this second year after graduation only 2 per cent of these boys from each of the residence areas had these plans. Twenty-seven per cent said they planned to be married in a few years, and 55 per cent said they had not considered when they might get married. These proportions were similar for all residence areas.

Educational Background and Plans

In high school the boys planning to attend trade school usually took either a shop or a general course. They were more likely to take a shop course than students with any other plan. Among the metropolitan and non-farm boys those attending trade school were about equally split between shop courses and general courses, with 40 per cent taking each course. Five per cent took a commercial course and 11 per cent a college-preparatory course. Among the trade school-bound students from the farm, 28 per cent took the shop course and 44 per cent the general course. Ten per cent took a college-preparatory course, only 3 per cent a commercial course, and 11 per cent of these took an agricultural course. In checking the reasons why they took the particular program they did, they checked the response "was best in this work" more often than did students with other plans. The two responses which they checked most often were "fitted vocational plans best," checked by 43 per cent of these students, and "course seemed most interesting," checked by 34 per cent of them.

The reason they checked most often for their decision to attend a trade school was to prepare for a vocation, which was given by 75 per cent of the boys going to trade school. The next most popular reason given was that it would enable them to make more money, which was given by 35 per cent of these boys.

A smaller proportion of these boys planned to attend college at some later date than was the case for boys with any other plan. Twelve per cent said that they were planning to go to college at some later date, 5 per cent after one year, 4 per cent after two years, 1.5 per cent after three years, and 1.5 per cent after four or more years. This figure of 12 per cent eventually planning on college compares with 28 per cent of those getting jobs and 35 per cent of those going into the military service.

Of the trade school-bound boys who lived on a farm, 60 per cent of them said they had a major responsibility for a part of its management while they were in high school, and 49 per cent said that there was a place for them in the operation of the family farm which would have provided a good future for them had they wished to stay.

Chapter 16

BOYS PLANNING TO ENTER THE MILITARY SERVICE

In 1950, 6 per cent of the male graduates planned immediately to enter the military service. In 1961, the proportion, 18 per cent, was three times as great. This was second only to the proportion planning to attend college, and greater than the proportion planning to get jobs.

Aptitude and Achievement

The mean MSAT score for students entering the military service (24.64) was well below that for those planning on college but close to, although significantly higher, than the means for boys planning on jobs or trade school. The mean high school rank (31.3) was lower than that for boys planning to attend trade school and equal to that of the job seekers.

> Boys entering the military service, then, tended to have aptitudes slightly above those of boys with the other two non-college plans, but had not attained a high school record equivalent to this ability. In other words, those entering the military service were more likely to be under-achievers in high school than those with other plans.

Age

As was true of the other non-college-bound groups, students entering the military service tended to be slightly older; that is, have a slightly smaller proportion of 17-year-olds and a slightly larger proportion of 18-year-olds than the college-bound group.

Father's Occupation

The occupations of fathers of males entering military service generally were similar to those of students who planned to seek employment or to enter trade school with a few notable exceptions. The proportions having fathers in the professions were the same. Proportionately more fathers of prospective military men, however, were in managerial, sales, or office work and fewer in skilled trades or laboring occupations than the fathers of those planning to seek employment. As compared with the job seekers, students entering the military service came slightly more often from white-collar backgrounds.

Education of Parents

The educational levels of both parents were similar to those of students who sought employment and lower than those of students who planned to attend college. The median educational level of the fathers of these students was graduation from high school for the metropolitan males, some high school for the non-farm, and an eighth-grade education for the farm area males. The median educational level for mothers was graduation from high school for the metropolitan and non-farm groups, and some high school for the farm group. Although the educational level of the parents of these students was similar to that for those who planned to seek jobs, the parents of these students were slightly more often high school graduates or had progressed beyond high school more than the parents of the job seekers.

Family Income

The responses of these students describing family income followed the same pattern as did that of responses describing parents' occupational and educational levels. The proportions of prospective military men reporting various types of family income were similar to those reported by men seeking jobs, with slightly more reporting family income coming from salaries and slightly fewer from wages. Sixty-one per cent of the metropolitan group and 51 per cent of the non-farm group reported family income from wages. These students also more often felt their families were "comfortable" or "well-to-do" than did those who planned to seek employment.

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Students planning to enter the military service came from the same size homes as did students planning to get jobs, and tended to come from slightly smaller homes than students who planned to attend college. On the item concerned with number of people with whom the student shared his bedroom, the students planning to enter the military service again responded in the same proportions as did those planning to seek jobs. Forty-eight per cent of students from the metropolitan and non-farm areas had bedrooms of their own, as compared with 59 per cent of those planning on college. They were not significantly different from students with other plans in the total number of persons living in their homes.

Cultural Status of Home

Seniors going into the military service reported numbers of books in their home similar to, but slightly more than, students who planned to seek jobs, and numbers well below those reported by students bound for college.

As was true among students with other plans, large differences were found between the residence areas. Nineteen per cent of the metropolitan, 28 per cent of the non-farm, and 36 per cent of the farm boys planning to enter the military service reported less than 25 books in their home. Students planning on entering the military service also reported that magazines such as the Reader's Digest, the Saturday Evening Post, Time, and the Ladies' Home Journal were more often found in their homes than did students seeking jobs.

Students planning on entering military service reported their parents were members of organizations considerably more often than did students planning to seek jobs. For example, among the metropolitan men 43 per cent said their parents were members of the PTA as compared with 34 per cent of those who planned to get jobs. In general, the organizations reported by these students resembled those reported by students planning on other types of schooling than college. This was one variable on which students going into military service were quite different from those seeking jobs.

> The students entering the military service came from homes which were similar in socio-economic level to those of students who get jobs, but they appeared to have a higher cultural level than the homes of the job seekers.

Earlier it was mentioned that the students entering the military service were on the average a little brighter than those getting jobs, and this may be caused by the slightly higher cultural status, or perhaps a higher ability level in the family causes the higher cultural level. In any event this difference is not affecting the high school achievement levels of these students.

Reasons for Plans

About a half of the metropolitan and non-farm boys who planned to enter the service took a general curriculum in high school. About a quarter took a shop or technical curriculum, about a sixth took college preparatory courses, and 7 per cent took a commercial curriculum. Proportions taking each of these curriculums were somewhat smaller among the farm students, since over one-fifth of them took an agriculture program in high school. The proportions taking these various curriculums were similar to those found among students who planned to seek employment. Reasons most often checked for deciding on these curriculums were that they fitted vocational plans the best, and that these boys were best in these courses.

The reason most often given as to why they decided to enter the military service, checked by 40 per cent, was to prepare for a vocation. Although this reason was the one most often checked, it was given less frequently by this group than by students with plans to continue their education (75 per cent). The second most popular reason given was the desire to be independent, and this reason was given more often by metropolitan boys who planned to enter the military service than by metropolitan boys planning any other type of activity. They were not entering the service in order to make more money than they otherwise could. This reason was checked by a quarter to a third of the students making other types of plans, but by only 5 per cent of these service-bound boys. They also checked the reason "to please parents or friends" less often than did other students.

Attitudes Toward College

A third of the metropolitan boys planning to enter military service said they would change their plans and attend college if they had more money. This was a higher proportion than so indicated in any other plan groups, and this proportion was three times as great as that for students planning to seek employment (11 per cent). Thirty-three per cent of the non-farm group also answered this question in the affirmative, but this proportion was smaller than the 38 per cent of those planning to seek jobs. Twenty-six per cent of the farm group indicated that they would attend college if they had more money, as compared with about an equal number of those who planned to seek jobs. Entering the military service, then, seems to be a popular alternative for those who might otherwise have gone to college. Forty-five per cent said they would need money to pay all of their college expenses, 48 per cent said they would need enough to pay half of their expenses, and 7 per cent said they would need enough to pay less than half of their college expenses. A smaller proportion of this group and those who planned to seek jobs said they could easily afford college if they wished, than was true for any of the other plan groups. Of the metropolitan and non-farm students, 12 per cent said they could easily afford college, and 20 per cent said they could barely afford college. Among the farm students this proportion was smaller, with 9 per cent saying they could easily afford college and 23 per cent saying they could barely afford it.

> Large numbers of students planning to enter military service say that they plan to attend college at a later date. More entering the service have these plans for eventual college attendance than students with any other type of plan.

Large regional differences occurred on this variable among these military service-bound males--40 per cent of the metropolitan, 31 per cent of the non-farm, and 20 per cent of the farm seniors were planning on college after their tour of service duty. Similar students with other non-college plans usually intended to go to college after a delay of one year, while most of those entering the service did not plan on college until after two or more years.

The mean aptitude test scores and high school achievement records of these boys are well below those of college-bound students, suggesting that many of these college plans are unrealistic. Even if only a part of these students do eventually enter college, if they enter at the same ratio for each regional area they will increase the already large regional differences in college attendance, since many more of the metropolitan seniors planned on delayed college entrance.

Family's Feelings About College

Two per cent of the males planning to enter the military service said that their parents insisted that they attend college. Fifty-nine per cent of the metropolitan group, 46 per cent of the non-farm, and 34 per cent of the farm students said that their parents "wanted" them to attend college. These proportions and differences between the residence areas were similar to those found for students who planned to get jobs upon graduation.

Influence of Marriage on Plans

Eight per cent of the metropolitan students, 6 per cent of the non-farm, and 5 per cent of the farm males who planned to immediately enter the military service said that marriage had influenced their plans. This was a smaller proportion indicating marital influence than any other group except those who planned to enter college. Less than 1 per cent of the males entering the military service were already married, and only 1 per cent of the metropolitan group planned to be married shortly after high school graduation. One per cent from each of the regions planned on marriage the year following that in which they graduated, and all of the rest either did not plan marriage for several years, or could not say. These students entering the military service, then, had fewer immediate plans for marriage than did students with other types of plans except those bound for college.

3

Chapter 17

SCHOOL AND COMMUNITY CHARACTERISTICS AND COLLEGE DECISIONS

The decisions of high school students to attend college are related to other attitudes and behavioral tendencies. These predispositions all are formed by the many experiences which constitute the student's life. These experiences in turn are influenced by families, teachers, friends, geography, finances, and other facts in the student's behavioral history.

Most of the determinants of post-high school plans reported in this study prior to this chapter are inferred from the student's comments about himself and his background. With the exception of test scores and high school percentile rank, all of the variables have been obtained from a questionnaire eliciting verbal responses from the student. Students' plans are related to what they have to say about their socio-economic status, to the number of books they say they have in their homes, and to similar self-statements. Major attention has been given to characteristics of the student and his immediate family.

Examination of the questionnaires revealed that the percentage of students planning to attend college varied not only from area to area but also from high school to high school. In some schools 5 per cent of the graduates were planning to attend college; in other schools all of them were. Table 17-1 shows the distribution of schools according to per cent planning to attend college for 1950 and 1961.

Considerable variation is found among schools not only in the per cent planning to attend college but also in the socio-economic status and ability of students. One would expect that if the schools were divided into those with large proportions of high ability students, as shown by high scores on college aptitude tests, and into those with small proportions of high ability students, that the former schools would have more students planning to attend college. Similarly, if one took schools with many students coming from high socio-economic homes, one would expect to find more students planning to attend college than in schools where many students came from low socio-economic homes. Comparison of college attendance rates of schools divided according to various characteristics related to college attendance would not reveal much about the influence of the school and the community on college decisions.

A more indirect method of observation was employed here. The authors hypothesized that if school and community characteristics were important in influencing the decisions of students, that schools characterized over a decade by changes in proportions of students planning to attend college also should be characterized by other changes.

One might hypothesize that in a school where the proportion of seniors planning to attend college significantly increased over an 11-year period that such things would have occurred as the development of counseling

Table 17-1

Number and Percentage of Schools with Varying Proportions of Seniors Planning to Attend College in 1950 and 1961

Per Cent of Students Planning to Attend College	1950 F	1961 F	1950 %	1961 %
Total N	496	547		
100	5	1	1	0
95-99	2	4	0	1
90-94	1	6	0	1
85-89	3	2	1	0
80-84	2	3	0	1
75-79	3	5	1	1
70-74	2	9	0	2
65-69	5	4	1	1
60-64	7	4	1	1
55-59	6	13	1	2
50-54	17	22	3	4
45-49	18	32	4	6
40-44	35	66	7	12
35-39	49	83	10	15
30-34	63	84	13	15
25-29	94	84	19	15
20-24	78	65	16	12
15-19	53	38	11	7
10-14	28	17	6	3
5-9	18	5	4	1
0-4	7	0	1	0

programs, the introduction of honors programs, the improvement of teachers and instruction, and the expansion of co-curricular activities. One also might hypothesize that schools where changing proportions of students attended college had changes occurring in the community or drew students from different kinds of communities. For example, such schools would have in their districts new housing areas attracting large numbers of upper middle class residents, increasing average pupil expenditures, or new colleges developing in neighboring areas.

In this analysis, schools first were divided into three groups according to size of senior class. The small school group was composed of schools having 30 or fewer seniors, the medium size group schools had between 31 and 100 seniors, and the large school group contained those with more than 100 graduating seniors.

Within each group the 10 per cent of the schools showing the largest percentage increase in seniors planning to attend college and the 10 per cent showing the smallest increase in college bound students were selected for study. In most cases the schools in the latter group showed an actual decrease in percentage of college bound seniors.

Table 17-2 shows the schools by code numbers included in the six subsamples and the proportions planning to attend college in 1950 and 1961.

To each of these schools a questionnaire entitled, "Trends in Post-High School Plans School Questionnaire" was sent after a letter had been forwarded to the superintendent of the school system requesting cooperation. Intensive follow-up resulted in questionnaires being returned from 13 of the 14 small schools showing increases in percentages, 13 of the 14 small schools showing decreases in percentages, 24 of the 25 medium size schools showing increases in percentages, 23 of the 25 medium schools showing decreases in percentages, 10 of the 11 large schools showing increases in percentages, and 10 of the 11 large schools showing decreases in percentages. Thus, returns were obtained from 93 per cent of the schools. Complete data were not available for each of the schools insofar as many schools omitted answers to one or more questions.

The questionnaire was designed to provide information concerning the following topics:

number of school days in school year
number of class periods spent in school by each student
total number of students in grades 9 through 12
average instructional class size
average amount of daily homework for students in grade 11
number of study halls per week for average student in
    grades 9 through 12
special classes provided
accelerated curriculums
advanced placement provided
meaning of grades in subject
types of course grades given
principle basis for assigning pupils to classes
summer school

religious education provided
participation in inter-system tryout of special experimental curriculum
school developed special experimental curriculum
average daily percentage of absenteeism
tenure situation
need for additional staff
number of books in the library
extracurricular activities
homogeneous grouping of students by ability
acceleration policy
policy on retarding slow learners
number of teachers with masters' degrees
number of teachers with graduate training in area they teach
number of teachers attending summer school the previous summer
number of teachers attending summer institutes sponsored by the government or other national organizations
annual starting salaries for male teachers with bachelor degrees and no experience
starting salaries for female teachers with bachelor degrees and no experience
average number of years of experience of teachers
percentage of all boys entering tenth grade who drop out before graduation excluding transfers
percentage of all girls who drop out
percentage of students with one or both parents in PTA
frequency of PTA meetings
primary type of residence served by school
description of area from which students come
average per pupil expenditure
current school tax rate per $1000 evaluation
percentages of students coming from homes where one or more foreign languages are regularly spoken
number of elementary schools in system
school consolidation affecting school
employers coming into community
employers leaving community
guidance program with one or more full-time counselors
number of persons in full-time guidance positions
number of part-time guidance couselors
amount of time devoted to guidance in terms of minutes per week devoted to students
number of guidance personnel of each sex
counselors' experience, background, and qualifications
length of time school has had to organize guidance program
kinds of tests given
grades at which tests are given
guidance materials available for student use
adequacy of guidance facilities
adequacy of referral sources in community
conditions under which conferences are held with parents
changes in counseling program
number of full-time classroom teachers
percentage of men teachers

Table 17-2

Percentage of College Planning Seniors in 1950 and 1961 in Schools Included in School-Community Characteristic Study

Schools with Increase in Per Cent Going to College

Small Schools			Medium Schools			Large Schools		
Code	1950 %	1961 %	Code	1950 %	1961 %	Code	1950 %	1961 %
202	6	39	002	15	46	228	28	44
205	0	31	104	27	63	320	25	42
270	14	50	192	19	46	448	25	57
288	25	67	274	13	25	546	33	37
474	31	70	302	39	58	712	25	41
496	33	72	316	20	42	764	25	44
584	4	40	354	18	49	772	29	48
646	14	50	504	14	42	154Y	27	50
768	0	43	544	13	34	172Y	39	57
864	0	31	600	24	48	142Y	54	78
402	6	36	664	12	34	122Y	56	22
572	10	39	678	11	32			
780	13	40	742	12	37			
784	19	75	858	26	47			
			880	18	41			
			884	17	43			
			016X	26	43			
			120	20	38			
			464	7	27			
			500	20	39			
			164Y	15	33			
			568	19	38			
			150Y	13	32			
			638	15	34			
			770	24	44			
Median increase 36%			Median increase 21%			Median increase 19%		

Table 17-2 continued

Schools with Decrease in Per Cent Going to College

Small Schools			Medium Schools			Large Schools		
Code	1950 %	1961 %	Code	1950 %	1961 %	Code	1950 %	1961 %
168	54	17	004	40	29	160	53	24
222	33	14	134	35	26	330	31	19
284	38	16	144	28	18	748	28	18
342	50	25	146	30	20	750	44	31
418	45	25	170	22	21	812	46	31
484	42	13	178	35	26	958	65	45
656	43	22	182	53	25	966	63	50
756	23	9	278	65	32	011X	66	39
758	42	12	362	33	24	041X	70	59
796	45	19	386	42	25	115Y	48	37
896	50	28	420	60	37	170Y	62	41
956	38	25	444	27	15			
132Y	44	29	468	36	27			
180Y	75	17	488	37	22			
			574	36	25			
			608	19	11			
			618	40	19			
			676	50	15			
			698	52	42			
			726	60	35			
			776	31	21			
			906	41	19			
			922	36	24			
			982	42	26			
			160Y	100	98			
Median decrease 22%			Median decrease 11%			Median decrease 13%		

In many instances the school was asked to provide information concerning the school or community characteristic as it was in 1950 and as it was in 1961. The retrospective data are of unknown validity insofar as the personnel in the school reporting the information frequently was not the same as it was in 1950 and even when persons had been at the school for the past 11 years, their records or memories often were not adequate to provide a good picture of the school as it was 11 years ago. In order to obtain the cooperation of the principals who primarily had responsibility for completing the questionnaire they were instructed, "please do not spend a great deal of time in searching for precise answers; however, we would appreciate your providing the best estimates you can based on information readily available to you."

We can assume that the data descriptive of the schools for 1961 are reasonable accurate. No such assumption can be made concerning the descriptions of the condition of the school or the community in 1950 and to this unknown extent any failure to support the hypotheses studied here may be due to the inadequacies of the early data.

Differences Among Schools

In general, the comparisons between schools showing decreasing proportions and increasing proportions of college planners showed some differences. As an example, let us consider differences related to changes in the number of books in the school library. Superficially the size of the library is an index of academic quality. We hypothesized that schools which were characterized by increasing proportions of students attending college also would have increased the size of the library to a greater extent than schools with decreasing proportions of graduates attending college. Combining the small, medium, and large schools, the number of books in libraries in 1950 and 1961 for the two groups of schools were:

	Decrease		Increase	
	1950	1961	1950	1961
Less than 500	3	0	4	0
Between 500 and 999	6	0	3	0
Between 1000 and 1499	5	3	5	2
Between 1500 and 1999	7	5	5	2
Between 2000 and 2499	8	4	7	5
More than 2500	10	31	21	37
TOTALS	39	43	45	46

Of the 39 schools with decreasing proportions of college planners and which provided information about 1950, nine had fewer than 1000 books in 1950, and none of the 43 schools providing 1961 information had so few books in 1961. Of the 45 schools providing 1950 information and showing increasing proportions of college planners, 7 had fewer than 1000 books. Of the 46 schools with increasing proportions providing data about 1961, none had fewer than 1000 books. Combining categories provides these distributions of percentages:

	Decrease		Increase	
	1950	1961	1950	1961
Less than 2499	74	28	53	20
More than 2500	26	72	47	80

In the "decrease" group, about three quarters of the schools in 1950 had fewer than 2500 library books, whereas in 1961 about the same proportion had more than 2500 books. In the "increase" group, about one-half had fewer than 2500 books in 1950; in 1961 this proportion was about one-fifth. Both groups of schools improved markedly in this respect, and in terms of percentage points, the "decrease" schools improved most. One cannot assume, however, that an increase from 26 to 72 per cent is greater than an increase of from 47 to 80, because the larger the initial percentage the more difficult may be each increment of improvement. In this instance both groups of schools improved the size of their school libraries.

> Noteworthy is the fact here that the "increase" group was superior to the "decrease" group in both 1950 and 1961, and that this superiority was especially noticeable in 1950. The group of schools with increasing proportions attending college reported larger libraries in 1950 than did the schools with decreasing proportions of college planners. Almost one-half of the former group in 1950 had more than 2500 books, as compared to only slightly more than one quarter of the latter group. During the 11-year interval, the latter group tended to catch up, but size of school library may be a cause or an expression of a more subtle school atmosphere that affects students and faculty slowly and in complex ways over a long period of time.

When one examines the figures regarding size of school library for the schools grouped by size of school, one observes that of the ten large schools with decreasing proportions attending college, only five in 1950 had more than 2500 books, whereas by 1961 all did. Among the ten large schools with increasing proportions of college planners, nine had this number of books in 1950 and all in 1961. The figures below allow one to continue this analysis.

	Decrease						Increase					
	Small		Medium		Large		Small		Medium		Large	
	'50	'61	'50	'61	'50	'61	'50	'61	'50	'61	'50	'61
Less than 500	2	0	1	0	0	0	4	0	0	0	0	0
Between 500 and 999	2	0	4	0	0	0	1	0	2	0	0	0
Between 1000 and 1499	1	2	4	1	0	0	2	1	3	1	0	0
Between 1500 and 1999	2	2	3	3	2	0	2	2	2	0	1	0
Between 2000 and 2499	2	1	3	3	3	0	2	3	5	2	0	0
More than 2500	1	6	4	15	5	10	2	7	10	20	9	10

The remaining information from the analysis of questionnaires returned by the schools will be summarized in less detail. The "decrease" schools reported a median of 170 days in the school year in 1950 and 173 in 1961. The "increase" medians were 172 and 175. Both groups lengthened their school year by three days during the 11-year interval and in both years the "increase" group had a longer median school year.

The average number of class periods each day spent in school by each student for the "decrease" group was 5.85 in 1950, 6.39 in 1961. For the "increase" group, the means were 6.0 and 6.30. The "increase" group had slightly more class periods in 1950; the "decrease" group more than caught up.

The "increase" group had slightly greater mean numbers of students in both 1950 and 1961, 185 and 233 in grades 9 through 12, as compared to 150 and 207 for the "decrease" group. The "increase" group reported smaller average instructional class sizes than did the "decrease" group, but the averages for the two groups did not change during the 11 years.

The two groups did not differ in either year on the basis of amount of daily homework required nor on the basis of number of study halls per week per average student.

The "increase" and the "decrease" groups differed on the basis of special academic programs. In 1950 among 20 "decrease" schools, a total of 23 special classes were reported. Among 29 "increase" schools, the total was 39. In 1961 the total for 40 "decrease" schools was 84 and for 46 "increase" schools, 110. The "increase" schools had more in 1950 and proportionately more in 1961.

Among 45 "decrease" schools, a total of 33 accelerated curriculums was reported in 1961, as compared to 45 among 47 "increase" schools. Slightly more of the latter group had such programs. Although relatively few schools in 1961 provided opportunity for advanced placement work in high school, 5 per cent of the "decrease" group and 17 per cent of the "increase" group did.

The groups did not appear to differ on the basis of how they used school marks or grading methods.

In the "decrease" group, 9 per cent reported summer schools in 1961 as compared to 21 per cent of the "increase" group. Less than 6 per cent in either group reported such programs in 1950.

The schools varied in their responses to the question concerning religious instruction. Answers from schools responding to this item were:

	Decrease		Increase	
	1950	1961	1950	1961
Included in regular curriculum	4	4	7	6
Released time for all	24	28	17	20
Released time for some	8	6	4	7
None	6	7	19	15

Neither group changed much from year to year but the "increase" group during both years had more religion in the curriculum and more schools with no religious education.

The "increase" group in 1961 tended to be experimenting with new curriculums more than the "decrease" group, but differences were small and inconsistent. Few differences between groups were found on the basis of absenteeism or teacher tenure (67 of 90 schools reported no tenure in 1961; 62 of 86 reported none in 1950). The groups did not differ on the basis of expressed need for additional professional staff although 33 per cent of the "decrease" group and only 13 per cent of the "increase" group expressed a need for additional maintenance staff. Sixty of the 93 schools expressed a need for more counselors, 38 for more teachers, 35 for more clerical staff, and 28 for more administrative and supervisory staff.

Some differences were observed between the "increase" and "decrease" groups on the basis of extra-curricular activities. In most instances more of the "increase" than of the "decrease" schools reported specific activities in both 1950 and 1961. Differences between the two groups were greater in 1950. For example, of the 45 "decrease" schools reporting, four had National Honor Societies in 1950 as compared to 21 of the 47 "increase" schools. In 1961, the figures were 8 and 25. The proportion in the "decrease" group had doubled; in the "increase" group it had grown only by about one-fifth. In the "increase" group, the number reporting inter-school athletics for boys had grown from 42 in 1950 to 45 in 1961; whereas in the "decrease" group it had dropped from 39 to 34. The figures for extra-curricular activities are shown in Table 17-3.

The average "decrease" school reported 7.53 activities in 1950 and 10.96 in 1961, as compared to averages for the "increase" group of 8.49 and 11.38.

More of the "increase" than "decrease" groups reported both in 1950 and 1961 homogeneous grouping by ability, summer acceleration programs, and required repetition of courses for needed credits. In 1961 the "increase" group had more teachers than the other group, about the same proportion of men teachers, and slightly more teachers with masters' degrees.

None of the schools reported male starting salaries of $4500 or over in 1950, whereas in the "increase" group, 16, or 36 per cent, of 45 schools and in the "decrease" group, 11 of 44 schools, or 25 per cent, reported such salaries. Similar differences were reported for beginning salaries for women.

The "increase" and "decrease" groups did not differ on the basis of reported drop-out rates in 1961, the average drop-out rate between grade ten and graduation being less than 10 per cent.

In the "decrease" group, the average school reported 19 per cent of pupils had one or both parents as members of the PTA, whereas in the "increase" group, this average was 28 per cent. The "increase" group also reported more frequent PTA meetings.

Table 17-3

Number of Schools with Decreasing and Increasing Proportions of Graduates Planning to Attend College Reporting Extra-Curricular Activities in 1950 and in 1961

Activity	Schools with Decreasing Per Cents Going to College 1950 N	Schools with Decreasing Per Cents Going to College 1961 N	Schools with Increasing Per Cents Going to College 1950 N	Schools with Increasing Per Cents Going to College 1961 N
Number of schools	45	46	47	47
Student Government	27	41	30	41
Newspaper	39	44	42	45
Magazine/Annual	37	33	39	44
Inter-school athletics-boys	39	34	42	45
Inter-school athletics-girls	4	5	2	4
Intramural athletics-boys	17	28	22	31
Intramural athletics-girls	15	26	17	27
Orchestra--Band	36	43	40	45
Glee Club	36	43	43	45
Fraternities--Sororities	1	0	1	1
National Honor Society	4	8	21	25
Subject Clubs	9	32	15	39
Chess Clubs	2	4	1	7
Hobby Clubs	3	7	4	8
Drama	39	45	43	46
Debate	7	17	8	15
Dances	20	42	30	39
Service Clubs	2	13	5	12
Other	0	0	2	7
Religious	2	6	5	9
Total number of activities	339	504	399	535
Mean number of activities	7.53	10.96	8.49	11.38

No consistent differences were reported between the two groups in either 1950 or 1961 concerning the primary type of residents served by the school except that both in 1950 and 1961, 11 of th 38 reporting "decrease" schools said they served prosperous farm areas, as compared to 6 of the 34 increase schools reporting for 1950 and 6 of the 32 reporting for 1961. Slightly more of the "increase" group, both in 1950 and 1961, described their area as "moderate priced homes." More of the "decrease" schools drew pupils primarily from farm areas in both 1950 and 1961. Differential changes were not reported.

The two groups did not differ on reported average per pupil expenditure or school tax rate in either 1950 or 1961.

The "decrease" schools listed 55 employers as entering the communities during the decade and 35 as leaving, whereas the "increase" schools listed 47 employers coming and 33 leaving. A slight trend appeared here for more employers coming to areas served by the large schools with decreasing proportions of college planners--42 reported by 8 large "decrease" schools as compared to 19 reported by 10 large "increase" schools. Perhaps more employment opportunities developed in the former areas.

The "increase" and "decrease" groups did not differ in proportions having guidance programs. In 1950, 26 per cent of the "decrease" and 22 per cent of the "increase" schools had guidance programs with one or more full-time counselors, and in 1961 proportions were 83 per cent for both groups. In 1961 the "increase" group reported an average of .83 full-time guidance persons per school, the "decrease" group .67 full-time persons. The "increase" group reported 5.3 minutes per day of guidance time per pupil, as compared to 3.9 minutes for the "decrease" group. The counselors in the "increase" group were reported as far better qualified than those in the "decrease" group. For example, in the 47 "increase" schools, 60 counselors had completed practicum training, as compared to 32 counselors in the 46 "decrease" schools.

> In summary, the "increase" schools reported more extensive and older guidance programs than the "decrease" schools. They tended to use more tests, particularly in 1950. The two groups did not differ as much in 1961 as in 1950; and the "decrease" schools in many ways had caught up with the "increase" schools.

Reported Changes

Changes in the two groups of schools discussed in this chapter to this point have been inferred on the basis of comparisons of conditions reported by the schools as they were in 1950 and 1961. One of the last sections in the questionnaire provided the schools with an opportunity to indicate directly changes in the school's counseling program occurring during the decade. The responses of the two groups are shown in Table 17-4.

Table 17-4

Changes in Counseling Programs Between 1950 and 1961 Reported by Schools with Increasing and Decreasing Proportions of Pupils Planning to Attend College

Changes in Counseling Programs	Decrease Group	Increase Group
Number of Schools	46	47
More full-time counselors	12	17
Fewer full-time counselors	2	1
More part-time counselors	22	22
Fewer part-time counselors	3	2
Training for counselors	29	30
More clerks	15	17
More personal contact with students	38	42
More personal contact with parents	35	40
More follow-up work	30	35
More standardized tests	41	41
Fewer standardized tests	2	1
National testing program	35	42
State or regional testing program	41	42
More detailed personnel records	43	44
Fewer detailed personnel records	0	0
Better use of test results	40	43
Cumulative records	43	44
More referral services available	34	34
Research	24	25
Minnesota State-Wide Testing Program	42	42
Other	0	1

The 46 reporting schools with decreasing proportions of college planners checked a total of 524 improvements (not including the three items implying retrenchment) or an average of 11.4 items per school. The 47 "increase" schools reported 561 items, or an average of 11.9 per school. These gross figures suggest substantial improvements in both groups of schools, but if the "increase" group improved more than the "decrease" group, the difference was not great.

Five more of the "increase" than the "decrease" schools reported additional full-time counselors, more personal contact with parents, and more follow-up work. Seven more indicated more participation in national testing programs.

Almost all the schools reported increases in contacts with parents and students, testing, national and State-Wide Testing Programs, personnel and cumulative records, and use of test results.

These "self-reports" indicate a great improvement in both quality and quantity of counseling programs in these two samples of schools during the decade. The similarity of the responses from the two samples suggests that the reported developments from the 93 schools presents a reasonably representative picture of what such reports would be from all Minnesota schools. The validity or accuracy of these reports, however, is another question.

Summary

The analysis of the questionnaire responses from the schools failed to substantiate the original hypothesis. Schools with more college planners in 1961 than in 1950 had not improved markedly more nor undergone greater community changes than schools with fewer college planners in 1961 than in 1950. Some trends were found of the differential changes that were hypothesized, but these appeared unimportant in light of more obvious findings.

Both groups of schools had changed their programs greatly during the 11 years. New programs were developed, more money spent, salaries increased, and academic emphasis increased. The over-all improvements reported by both groups of schools were so great that differences in changes between groups were hard to detect. To an unknown extent this is influenced by the questionable accuracy of retrospective reports such as were used here.

> Perhaps the most significant conclusion from this analysis derives from the reportedly higher status in 1950 of the schools with increasing proportions of college planners. Almost every comparison showed that in 1950 those schools had more programs, better salaries, more money, and better facilities than did the others. Both groups improved. The "decrease" group started from a lower level in 1950. The "increase" group was striving to improve when it already was at a level where each increment of im-

> provement may have been more difficult to achieve. These schools were better schools in 1950; during the decade their superiority as a group was reduced. This, in a sense, suggests the research design employed was not appropriate. Ideally, "increase" and "decrease" schools should have been matched on the proportion of college planning students in 1950.

The implication is clear. If schools wish to change programs so that more graduates (presumably qualified) will continue their educations, such changes will require time. Pupils' post-high school plans are related closely to what can be called "school atmosphere," and this is a result of many things in the school and community. Specific changes in a school may influence "atmosphere" slowly and subtly, and only after time has provided the opportunity for this change in atmosphere, will plans of pupils change.

Chapter 18

CONCLUSIONS AND IMPLICATIONS

This study of the plans of graduating high school seniors and the conditions which influenced their plans was designed to provide information to counselors and educators who work individually with students and persons concerned with social planning related to the use of talent, man power, and the social potential of our youth. The information has pertience for decisions involving general and liberal education, vocational and occupational training, job placement, organization, instruction, admissions, and counseling in higher education, and many problems of the secondary school.

The observations of students in the 1961 graduating class in Minnesota corresponded to similar observations of students who graduated in 1950. The earlier study provided not only a guide for the selection of methods to be used in the latter study but also provided a basis for comparison so that trends in Minnesota during an 11-year period could be identified.

Almost all of the graduating seniors, approximately 45,000 in almost all of Minnesota's 560 high schools, completed a detailed four page questionnaire. For almost all students college aptitude test scores and high school grade averages were available through a testing program in which the students participated during their junior year in high school. Information analyzed consisted of ability test scores, high school percentile ranks, plans of students for the year after graduation, and information concerning the family, social, cultural, economic, financial, and personality backgrounds of the students.

The principal findings can be summarized:

> Forty-one per cent of all Minnesota high school graduates planned to attend college the year after graduation.
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> The follow-up study of students one year after graduation showed that the proportion actually attending college closely resembled the proportion with such plans.
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> The proportion of high school graduates attending college had increased slowly over the 11-year period with the average increase amounting to approximately one-half of one percentage point per year.

The proportionate increase of high ability students planning to attend college was far greater than the increase found among the total group of high school graduates.

Post-high school plans are closely related to ability, economic and cultural status, sex, area in which students live, family attitude, and personal values and attitudes.

Students with different post-high school plans can be arranged socially, economically, and educationally in a hierarchy which tends to place them in this order:

College planning students
Students planning on nursing
Students planning to attend other schools
Students planning to enter military service
Students planning to seek employment

As the proportion of the high school graduates attending college approaches 100 per cent, ability and financial determinants become less important in influencing decisions.

Among metropolitan students over the 11-year period college attendance seems decreasingly related to ability and financial status. This did not occur among other students.

The primary loss of talent as shown by high ability students who do not attend college is found among girls and among students from farms.

Marriage has some influence on post-high school plans but apparently immediate marriage or plans for such marriage have relatively little influence on the plans of men and affect the plans of only a few women.

> The total number of high ability graduates in Minnesota who are not planning to attend college is over 1600. Of these, 32 per cent said they would attend college if they could afford it. The average student in this latter group said he would require about one-half of the funds needed for college. Assumming the cost of college to be $1400 a year, the total amount needed by this group each year approximates $375,000.

> Changes in school conditions are not directly related to increases or decreases in proportions of graduates planning to attend college, but the status of a school at the beginning of a decade is indicative as to whether the proportion of its graduates attending college increases or decreases.

The decisions of high school graduates are more important to the student than to any other individual or group; and as these concern the student, so must they involve his parents, teachers, and counselors. Students now seldom know much about the process through which they arrived at their decisions and relatively little about influences determining their plans. Many students can present a relatively brief and superficial expanation, and many can justify their plans. A surprising number of students who attend college will explain that their parents had nothing to do with this decision, that their parents constantly said the decision was the student's and not the parents'. Many are unaware of the more subtle influences of the parents.

Most counselors attempt to help students make decisions and almost all students when they talk with counselors have preferences for some alternatives over others. Part of counseling consists of helping students learn more about their preferences and decide about their validilty. A basic assumption made by counselors is that people who make choices should make informed choices and that they should know as much as possible about why they are so choosing.

Counselors primarily are interested in helping students make sound choices and assisting them to understand their decisions. Parents, teachers, and many others in the community also hope that students will make sound and informed choices. Usually the interest of the parent or teacher is primarily for the welfare of the student. A parent may attempt to influence his child to decide to attend college because he believes that in the long run his child will have a happier life as a college graduate. Parents are influenced by their own needs for status and perhaps by the hope that the economic welfare of their children will reflect on their own status in the community and on their own financial well-being, but persons attempting to influence students to attend college usually are motivated by a desire to help these young people.

Representatives from many social institutions and community organizations have an interest in influencing the decisions of young persons. Educational administrators hope that enough qualified persons will decide to become teachers. Every citizen hopes that enough young persons will decide to enter necessary occupations such as medicine, automobile repair, and mortuary science. Representatives from industry hope for an adequate supply of engineers, accountants, personnel directors, and technicians. If too few persons are deciding to enter these careers, or if the wrong people are so deciding, then these social agents attempt to influence decisions so that an adequate distribution will prevail in the labor pool.

These were the reasons for undertaking a study such as has been described here. Counselors presumably will benefit and become more effective by learning more about the decisions made by young persons and the determinants of those decisions. Society in general will benefit by learning that which will be helpful in influencing decisions. Behavioral scientists will satisfy their curiosity and refine their theories with information so derived. Finally, students will be able to improve their self-understanding and their ability to make better and more appropriate decisions.

The Act of Post-High School Decision

The educational or vocational behavior of a student immediately following high school graduation can be considered as a combination of specified attitudes and observable acts occurring within a definable situation. For purposes of convenience we will discuss attitudes and behaviors directed toward college although the same approach can be applied productively to attitudes and behaviors directed toward other post-high school objectives. The same kind of analysis presented below also could be presented as it regards post-high school employment, attending schools of nursing, starting trade or business schools, or perhaps even immediate marriage.

The behavior here called "college attendance" consists of rather specific acts. These acts themselves can in turn be analyzed into even more specific acts, but here we will deal with relatively gross classifications. Some of the specific acts of which college attendance consists include:

1. requesting and receiving an application for college admissions
2. completing admissions forms
3. requesting recommendations to be sent to a college
4. requesting high school records to be submitted to a college
5. payment of application fee
6. submitting application forms to a college
7. reserving dormitory rooms or finding living quarters
8. traveling to the college
9. payment of college fees
10. registration for college courses
11. participating in college orientation programs
12. purchasing of college texts
13. attending classes
14. engaging in other college activities
15. taking examinations

College behavior as it encompasses these acts can occur only after the student has made some decision to attend college and this decision results from many conditions. The study described in this report regards the decision to attend college as equivalent to the behavior of attending college and evidence is reported indicating the extent to which this assumption is justified. We will discuss the decision or the plan to attend college as if it were the same as the behavior of attendance, recognizing the limitations of this assumption.

The influences effecting the decision to attend college can be categorized roughly as related to family, school, peers, and self.

The characteristics within the family include economic variables, cultural and educational variables, social and emotional relationships within the family, and for lack of a better term, attitudes in the family or "encouragement toward college." The economic variables themselves are complex and although they are summarized by referring to the total financial resources of the family, they also depend on the financial demands the family must meet, its habitual pattern of spending and saving, the expectations and probabilities of future income, and the attitudes of the family toward its financial resources.

The cultural and educational variables are equally complex and include the amount and type of education of both the mother and the father, the reading, intellectual, and cultural habits of the family, the educational and intellectual attitudes and activities of the groups of which the family is a member, and the intellectual and cultural community resources to which the family has access.

The attitudes and emotional relationships within the family are related to the extent to which children rebel against parents, authority, and social expectations, the extent to which they are docile and dependent on the opinions of others, the immediacy of their needs for complete, or what they regard as complete, independence, and their willingness to postpone the gratification of certain satisfactions in order to satisfy other needs.

The variables directly related to school influences include the student's satisfaction with his past school experiences and his emotional reaction to his current and immediately past experiences. Satisfaction is a result of other experiences but it is an emotional condition frequently directly observable through verbal and other overt behavior that has direct meaning in determining the decisions of high school graduates. Another school variable can be labeled "stimulation." This is related closely to satisfaction but it includes more than satisfaction insofar as its chief expression is shown through an increased desire to learn. Included as school variables will be the adequacy of the school itself, which would include such things as training and experience of teachers, amount of money spent per pupil, adequacy of the library, laboratories, and building, and the curriculum and activities program of the school. Finally one important variable would be the counseling and guidance program of the school and this would include the availability and the adequacy of personal counseling, the adequacy of personnel and guidance records, and the extent to which individualized and personalized attention is given to students.

The variables directly related to the student's peers which influence post-high school decisions include the number and types of friends and associates of the student, their attitudes, habits, plans, families, school experiences, and out-of-school attitudes.

Another perspective of these influences is gained when we look at them from the point of view of the student's self or his own personality. Decisions are influenced by the ability of the student and this ability is a function of his organic and physiological constitution and his complete behavior history. An important varisble is related to his needs and interests and again these are complex variables that can be envisaged in many ways. His personal adjustment is another self-variable influencing decisions, adjustment to his peers and friends, to his family, and to his community.

Listed above are the sources of influences determining post-high school decisions. Other sources can be identified such as those related to the church, community groups, or mass media of communications.

The decision to attend college always is a process. Sometimes the decision will appear almost spontaneously and the process is relatively brief but usually the decision is merely the verbal enunciation which accompanies a process in its later stage. For many students the process begins when the child is small and family, school, and peer variables are influencing the student even before he begins school. In some cases the process actually is not really active until the student has entered the junior high school or perhaps even the senior high school. Usually for most students influences that are determining post-high school plans can be identified prior to the ninth grade. They do not terminate when the student makes his decision, or for example, when he enters college, but the behavioral manifestations resulting from these influences do change.

The decision of the student and his subsequent behavior are not only a result of the conditions described here but also a function of the alternatives available to the student. If the probability of attaining an objective is so small that it is practically impossible, this cannot be considered as an alternative. A child who is mentally retarded and unable to read or write does not have college as an alternative. A paraplegic idiot would have no educational or vocational alternatives. It would make no sense to talk about his decisions or about his choice.

Similarly, many high school graduates make certain decisions not as a result of choice among alternatives but rather as a result of limited alternatives.

The great increase in the proportion of high school graduates who attend college can be attributed in part to the gradually increasing educational level of the population, the greater availability of colleges, the greater awareness of the need for educational and vocational competence, and the increasing ambitions of children and their parents. Many students attend college, however, not as a result of any of these direct influences but more because many children have so few or perhaps no alternatives. The largest proportion of high school graduates have I.Q.'s between 90 and 110. Many of these students have no great, or perhaps even observable, intellectual drive or curiosity driving them toward higher education. Many of them have no economic or vocational goals that suggest the need for higher education. Many of them have no unusual aptitudes, abilities, or skills that encourage serious consideration of training or occupations requiring other than academic education. Many of them have no alternatives other than to enter college.

The average high school graduate such as we have been describing has restricted opportunity to find a job that promises any kind of a future. Apprenticeship opportunities are available to a few of these persons, and they require certain specialized aptitudes that many do not possess. Some on-the-job training opportunities are available but these are rare. Many men enter military service immediately after graduating from high school with the hope that when they are released from service they will be older and attractive jobs will be availabe to them. Many young women are married immediately following graduation and solve, or at least postpone, the problem of choice. An increasing number of young persons, however, are attending college because it is almost inevitable that they do so. They have not really made a choice, neither have their families chosen, but they have taken the only road that seems to offer any probability toward fulfillment.

Personal Needs in Post-High School Plans

The determinants of post-high school plans exert their influence on the student over a long period of time. In light of the complexity of these determinants and the length of time during which they irregularly exert their influence, the behavior of students becomes more understandable if the concept of needs is used. Needs are psychological conditions inferred to be present within the individual, these inferences being based on observations of the history of experiences of the person and his subsequent behavior. The needs are concepts and not attributes of the individual, but as concepts they help describe the person as he is a result of his history and as he is a potential doer of deeds.

The number of needs that can be conceptualized is almost limitless. A rather restricted number, however, appear to be most relevant in a consideration of the planning of high school graduates. A first need to be postulated here is the need to do something, a need for action, a need to behave. Once a student completes his high school career, he can hardly cease existence and consequently, must do something. Doing something may consist of sitting at home looking out of a window, but we cannot question the inevitability of some behavior on the part of the student. The need to do something may be basic and underline all other needs. Discussions with many students suggest that this is the need that is most potent in setting them on their post-high school road.

The need for independence is one described by many students when they discuss their plans. Sometimes this is described as a need to escape an undesirable condition of dependency. Some students say the reason they are going to college is to get away from home, to escape an overly strict mother or a demanding father. Some students say they are going to work so they do not have to ask someone else for every cent they need, so they can associate with whom they wish, and "live the kind of life they want." For other students this need for independence is expressed not so much by a desire to escape from an unhappy situation, but rather to attain or reach a level they consider more mature or more appropriate for a young adult. Young girls living at home quite free from parental restraint and maintaining satisfying relationships with parents and family often move into apartments of their own or rooming houses because they consider this to be the appropriate way for a young lady to live. Many students decide to move away from home when they attend college so they can test themselves, living on their own, assuming greater responsibility for their own actions, and facing crises and emergencies using only their own resources. The need for independence here, essentially is a need to change a way of life, from a way considered appropriate for a child to a new way considered more appropriate for an adult.

The need for security often can be detected as influencing decisions of students. Sometimes this is a need in contrast to the need for independence. Students may fear leaving home and consequently decide not to enter a school which would require them to live away from home. Students might fear to leave home and seek employment elsewhere. The need for security might influence one student to take a job in a new and strange situation; it might influence another student to decide not to enter college because he would not be certain from where all of his money would come. Some students define security as money in the bank, a down payment for a home, or a job with continuing income, and these students might be influenced to accept employment immediately after high school graduation. Other students define security as obtaining a job and a way of life requiring basic preparation and consequently are motivated to enter college in order to attain such security. For each person, security is something different and perhaps every decision is influenced by the person's striving to attain security as he perceives it.

Students have need for status, recognition, and acceptance and many decisions are influenced by these needs. In making social beings out of squalling organisms, society places most reliance on social reinforcement. The approval and disapproval of parents, teachers, and peers may be the principle determinant of personality development and certainly many students decide on post-high school plans because these decisions bring to them approval from persons they value. All of the associates of a student rarely agree on what is socially approved behavior. A boy's teachers and counselors may most approve his attending college; his parents may most approve his seeking employment; and his friends may grant most status to associates who enlist in the Army. Students do not seek approval from the same source for all kinds of activities. A student may be quite willing to derive satisfaction from reinforcement provided by a teacher for satisfactory academic performance and he may ignore the reactions of other students. On the other hand, he may place great reliance on the acceptance of other students for behaviors outside of the classroom. When needs for status and recognition are discussed, consideration always must be given to the source of status, the behavior being acknowledged, and the conflicting values of persons from whom the individual receives recognition.

All persons have needs for learning and for mastering skills and for some persons these needs are important determinants of post-high school plans. Stimulation received from parents or teachers may result in students wishing to learn more about literature or mathematics simply for the excitement and satisfaction such learning provides. Many students enjoy learning about new ideas and have pleasure in developing skills in analyzing and evaluating ideas and experiences. Many students decide tc attend college because they want to learn; many students decide to take jobs because they want to become experts.

Finally, a need can be conceptualized that encompasses all of the needs discussed here, a need for "role fulfillment." Essentially, this means that many persons have an idea as to the kind of life they wish, the kind of persons they wish to be, and their behavior is strongly motivated by the need to attain this role. This role takes into account a person's ideas about independence, security, status, and competence, and always it is relative to the roles of others about him as perceived by the student. Seldom is this role defined in detail by the student. He may have a vague, general idea that this role encompasses, among other things, his being a college graduate. When you ask students what kind of a life they would like to lead, you get varying answers. A student might say that he wishes to have a job that will allow him to live in a desirable area, to raise a family in a certain way, to travel to interesting places, to derive specified satisfactions from the kind of work he will do, to listen to preferred records and music, to read books and magazines, to participate in his hobbies, to have congenial friends, to assume social and community responsibilities. When a student says, "I want to be a lawyer," frequently he means all of these things. When a student says, "I want to be able to have an income of $14,000 a year," he may mean all of these things. Most persons do not really see the roles they have defined for themselves until they are rather successfully playing or living these roles. Then a person looks at himself and his role and decides what his values have been and how satisfying his life is.

The Factor of Fortuity

A statistician who looked at the research on the decisions of high school graduates concerning post-high school plans would decide that to date no more than 50 per cent of the influences determining these plans have been accounted for or identified. Knowledge of the abilities, family backgrounds, socio-economic conditions, schools, and personality variables of high school graduates predicts college attendance no more than would be indicated by a multiple correlation coefficient of .70. This limited knowledge is due to two things, first, the inadequacy and incompleteness of our methods of observation, measurement, and analysis, and second, the fortuitous nature of the behavior with which we are concerned.

Many decisions of high school graduates are influenced by accidental factors. A student who is considering attending college may live in an area where due to suddenly changing economic conditions, most of the workers become unemployed. He is unable to attend college. Another student who is not planning to attend college inherits $3,000 from a relative and changes his plans. A student may be informed that a changed policy of his Selective Service Board will result in his changing plans. A student may develop infectious mononucleosis or tuberculosis and his plans will be changed.

The policies and organizations of schools may change. The establishment of a new college in an area may result in changes quite unpredictable before knowledge of this new school is generally known. Economic and health conditions, even weather itself, changes in transportation facilities, and new emphases in newspapers and other means of mass communication, all can influence the decisions and behaviors of students.

These fortuitous factors perhaps are less important for students who have committed themselves definitely and for long periods of time to specific decisions. For many students, however, decisions are tentative and borderline. Many students face alternatives that appear equally attractive, or equally unattractive, and the influences that determine the choice of one alternative over another are small and frequently almost unobservable. Many situations become so complex that the student really cannot anticipate what will happen nor can anyone else.

Elsa, when graduating from high school, decided to marry Donald, a boy with whom she had been going for several years. Donald was drafted prior to the marriage and the couple had to decide whether to get married before or after his military service. She decided that she would attend college for the 18 months during which he would be in service, and then he decided that after service he also would attend college. Elsa then had to decide whether she should attend college or seek employment to acquire a nest egg so that the two of them could manage while he attended college with provision for her attending school part time and completing her work after he completed his. The international situation then changed so that the policies of the Selective Service Board shifted and Donald then learned that he would not be drafted after all.

Each student faces a pattern of events and probabilities quite unique for him and what we here call fortuity simply is the unique aspect of the determinants of plans. Because of this, our ability to predict accurately for the individual always will be limited, although increased knowledge and improved methods should allow great improvement in our ability to improve prediction of group behavior.

Some Concluding Thoughts

The following statements are not conclusions derived from the data analyzed in this report, but rather are suggestions and ideas originating from or finding support in the results described in preceding chapters. They are limited, of course, by the geographical and temporal focus of the study, Minnesota in 1950 and 1961, but the ideas have relevance for American higher and secondary education today.

1. As the loss of talent between high school and college diminishes, colleges must become increasingly concerned with their responsibility for the large loss accompanying the drop-out of competent students after matriculation.

2. Special efforts are required to reduce talent loss between high school and college for easily identified sub-groups such as women, children from farms, and children of unskilled workers.

3. Although the relative proportion of students requiring scholarships may not increase, larger scholarships may be necessary if more talented high school students are to be induced to attend college.

4. The motivation which results in students attending college is a motivation of both the student and his family and efforts to induce more competent students to attend college must be directed toward the family and the child.

5. The inevitability of college attendance for many high school graduates not intellectually or socially motivated for traditional colleges requires that new forms of post-high school education be developed and that many colleges develop new and unique programs. To meet these needs the diversity already characterizing American higher education must be increased and encouraged.

6. Changes made in high schools to aid students make decisions leading to more effective use of their talents will show results only after several years. One of the most effective ways to have good students this decade is to have had good schools during past decades.

7. The average quality of college students does not decline as the absolute and relative number of students attending college increases.

Appendix I

"AFTER HIGH SCHOOL--WHAT?" QUESTIONNAIRE

UNIVERSITY OF MINNESOTA
OFFICE OF THE DEAN OF STUDENTS
STUDENT COUNSELING BUREAU
1961

INSTRUCTIONS TO ADMINISTRATORS OF THE "AFTER HIGH SCHOOL—WHAT?" QUESTIONNAIRE

Before giving the questionnaires to the students, please read this for your own information:

This questionnaire is part of a study to determine why high school seniors attend, or do not attend college. Since this questionnaire is being given to all of the high school seniors in the state, the method of presenting the questionnaire must be uniform in all schools. Some of the questions ask for information about which students may be uncertain, or in some cases, ignorant. We are anticipating, therefore, that a number of questions will be asked of the administrators about the questionnaire. Here is a list of the recommendations about how to handle such questions, or how certain items on the questionnaire should be answered.

The two spaces in the upper right-hand corner are to be left blank.

Item 7. *Name.* We would like the formal name of the student—not nickname.

Item 24. *Occupation of father.* This is an attempt to classify the occupational level of the father. Not all of the occupations have been listed of course, but the major headings have been given and examples are listed in each occupational level. If a student raises the question of an occupation which is not listed among the examples, he should be told to match his father's occupation with the sample listed. If he cannot do this, he should then use the "other" category.

On items 27 and 28 which are concerned with the source of *family income* and the verbal description of the family income, some students may raise objections. They should be reassured that the information will be kept confidential.

Item 29, *course or curriculum taken in high school.* Some students may be taking more than one of the courses. In case college preparatory is one of the courses, they should give that priority and check only that.

Item 39 concerned with the *extent to which the family will help pay college expenses* should be answered only by those who are going to college. If their intention is to go to trade school or business school, they should leave this question blank.

Item 44 concerned with possible *attendance in a graduate or professional* (medicine, dentistry, law, etc.) *school* would *not* include the fifth year in five year engineering program or night school courses unless leading to a specific graduate degree.

Item 61 should be answered in the negative by students whose *participation in running the farm* has been limited to helping with farm chores or summer work. An affirmative answer should be given by students who have had a major responsibility for some or all aspects of the farm operation or who have an extensive farm project of their own as would be the case with a major 4-H project.

On items 21-46 (page 4), T should be circled if the student feels the statement is *true* or *mostly true* as it applies to him and F should be circled if the statement is *false* or *not usually true* as it applies to him. Stu-

(OVER)

dents should answer all the items they can and leave as few as possible blank. It may be suggested that students answer these items quickly and not spend too much time on any one question.

In general, on questions which students feel they cannot answer with a reasonable guess, it is the best policy for them to write that they don't know.

INSTRUCTIONS TO STUDENTS TO BE READ TO THEM BY THE ADMINISTRATOR OF THE "AFTER HIGH SCHOOL—WHAT?" QUESTIONNAIRE

This questionnaire is a way of finding out what high school seniors all over the state of Minnesota are planning to do next year and also what the reasons for their plans are. Some of the questions ask you to describe certain aspects of your family and how they feel about your plans. Because families differ quite a bit in their way of life and their ideas, it is necessary to have this information about the family in order to understand why students make the kinds of plans they do. All of the information you give will be strictly confidential. No unauthorized person will see the information. The answers will be punched on cards without your name and will be compiled statistically for all of the students.

The results which will be obtained from this survey will be used in planning educational facilities for yourselves and for future generations of students, so we ask you to answer accurately. Some of the questions you will find difficult to answer because you may not have sufficient information. If you feel, however, that you can make a good guess, answer by guessing. If you feel you cannot make a good guess, ask me for instructions. All questions will not be completely meaningful for all students; however, you are asked to give a serious and thoughtful answer to each item, even if it does not appear to be very significant for you.

Now go ahead and start filling out the questionnaire, remember to use your full name; don't use your nickname.

UNIVERSITY OF MINNESOTA

OFFICE OF THE DEAN OF STUDENTS

STUDENT COUNSELING BUREAU

H.S. ____________________ 1-3

Iden. No. ________________ 4-6

After High School—What?

For High School Seniors

1961

In order to provide information about what high school seniors are planning for the next year and to show the reasons for these plans, you are being asked to answer the questions below.

Write in the answer or place a check mark (√) before the appropriate word or phrase.

7-20. Name (Print)____
Last First Middle

21. (1)______Male (2) ______Female

22-23. Age last birthday__________ years

24. Occupation of father: (Check the item which applies)

(1)________Profession (lawyer, banker, doctor, teacher, minister, dentist, etc.)

(2)________Owns or manages business (store, gas station or garage, photography or barber shop, insurance agency, hotel or cafe, repair shop, newspaper, etc.)

(3)________Office work (bookkeeper, cashier, postal clerk, etc.)

(4)________Sales (insurance, real estate, retail store, etc.)

(5)________Owns or manages farm

(6)________Skilled tradesman (carpenter, electrician, machinist)

(7)________Factory worker (laborer, farm laborer, janitor, mine laborer)

(   ) Other occupations: (Be specific)

____
(Write in name of occupation)

25. Education of father: (Check highest level attained)

(1)________Did not attend school

(2)________Some grade school

(3)________Completed eighth grade

(4)________Some high school

(5)________Graduated from high school

(6)________Business or trade school

(7)________Some college work (including teacher training)

(8)________Graduated from college

(9)________Holds more than one college degree

26. Education of mother: (Check highest level attained)

(1)________Did not attend school

(2)________Some grade school

(3)________Completed eighth grade

(4)________Some high school

(5)________Graduated from high school

(6)________Business or trade school

(7)________Some college work (including teacher training)

(8)________Graduated from college

(9)________Holds more than one college degree

27. Which of the following ways best describes how your family gets its income? (Check the one phrase which best applies)

(1)________Professional fees or business profits (Including profits from farms)

(2)________Fixed salary (Paid on a monthly or yearly basis)

(3)________Wages (Paid on an hourly or daily basis and depending on number of hours worked)

(4)________Income from investments (Stocks, bonds, real estate, insurance)

(5)________Pensions (Government or other)

28. Check the phrase which best describes your family's income:

(1)________Frequently have difficulty making ends meet

(2)________Sometimes have difficulty in getting the necessities

(3)________Have all the necessities but not many luxuries

(4)________Comfortable but not well-to-do

(5)________Well-to-do

(6)________Wealthy

29. Course or curriculum taken in high school: (Check the one which best describes your course)

(1)________Commercial (2)________Agriculture (3)________Shop or Technical (4)________College Preparatory (5)________General

(   ) Other____
(Write in)

30-31. **Check the most important reason or reasons why you originally selected the course you checked in item 29:**

30

(1)________Only one offered in school
(2)________Teacher's advice
(3)________Counselor's advice
(4)________Parent's advice
(5)________Required to by school
(6)________Brothers or sisters took it
(7)________Seemed easiest
(8)________Required by parents

31

(1)________Was best in this work
(2)________Fitted vocational plans best
(3)________Course seemed most interesting
(4)________Friends took it
(5)________Brother's or sister's advice
(6)________"Everyone else" took it
(7)________Don't know
( ) Other________________________ (Write in)

32-33-34. **What are your plans for next year (1961-1962)? (Check the one plan you are now most seriously considering)**

32 | 33-34

(1)________Get a job.......................... If yes, what kind of work?________________
(2)________Work for parents.......................... If yes, what kind of work?________________
(3)________Go to college.......................... If yes, which college?________________
(4)________Go to trade school.......................... If yes, which school?________________
(5)________Go to business school.......................... If yes, which school?________________
(6)________Go to other school.......................... If yes, which school?________________
(7)________Do postgraduate work in high school
(8)________Enter the Military Service
(9)________Other________________________ (Write in)

35-36. **Check the reasons for making the plans you indicated above:**

35

(1)________To prepare for a vocation
(2)________To be with old school friends
(3)________To get a liberal education
(4)________To start making money quickly
(5)________To please parents or friends
(6)________To be independent
(7)________To make friends and helpful connections

36

(1)________It is "the thing to do"
(2)________Foregone conclusion, never questioned why
(3)________Will enable me to make more money
(4)________"Everyone here" does this
(5)________Tired of studying, have had enough education
(6)________Only thing I can afford to do
(7)________Like school
(8)________ Other________________________ (Explain)

37. **Has marriage or the early prospect of marriage influenced your plans for the coming year?**

(1)________Yes (2)________No

38. **In your present thinking, have you any idea when you plan to get married?**

(1)________Already married
(2)________This year
(3)________Next year
(4)________In a few years
(5)________Can't say
(6)________Not planning on marriage

39. **If you are going to college next year (1961-1962), to what extent will your family help you pay expenses?**

(1)________Pay all my expenses
(2)________Pay most of my expenses
(3)________Pay some of my expenses
(4)________Pay none of my expenses

40. **If you are not going to college, would you change your plans and attend college if you had more money?**

(1)________Yes (0)________No

41. **If you checked "Yes" to the last item, how much more money would you need to attend college?**

(1)________Enough to pay all my expenses
(2)________Enough to pay about half my expenses
(3)________Enough to pay less than half my expenses

42. **If you are not going to college, could you afford to go if you wished to go?**

(1)________Could afford it easily
(2)________Could barely afford it
(3)________Could afford it but it would involve many sacrifices
(4)________Could not afford it

43. How does your family feel about your going to college?
(1)________Insists that I go
(2)________Wants me to go
(3)________Is indifferent
(4)________Doesn't want me to go
(5)________Won't allow me to go

44. If you are planning on college, are you considering any graduate or professional training after your undergraduate college work?
(1)________Yes (0)________No If "Yes," indicate type________________________________

45. If you are not going to college next year, do you plan to go at some later date?
(x)________No
________Yes (If you checked "yes" here, indicate when you plan to attend college):
(1)________After 1 year (2)________After 2 years (3)________After 3 years (4)________After 4 or more years

46. Do you have a furnace or central heating in your home?
(1)________Yes (0)________No

47. Do you have running water in your home?
(1)________Yes (0)________No

48. Do you have both hot and cold running water?
(1)________Yes (0)________No

49. Do you have an electric or gas refrigerator?
(1)________Yes (0)________No

50. Do you have a telephone in your home?
(1)________Yes (0)________No

51. Does your family own or rent a deep freeze unit or a locker?
(1)________Yes (0)________No

52. Do you have electric lights in your home?
(1)________Yes (0)________No

(Items 53-59 in next column)

53. Do you have a television set in your home?
(1)________Yes (0)________No

54. Does your family own your home?
(1)________Yes (0)________No

55. How many people live in your home?........ ________( )

56. How many rooms are there in your home excluding the bath room?........ ________( )

57. How many people excluding yourself sleep in your room? .... ________( )

58. How many passenger cars does your family own? (Check)
0________ 1________ 2 or more________

59. What is the year and make of your family's newest car?
Year________ Make________________ ( ) ( )

60. Do you live on a farm? (1)________Yes (0)________No

61. If you live on a farm, have you had a major responsibility for a part of its management?
(1)________Yes (0)________No

62. If you live on a farm, is there a place for you in its operation which would provide a good future for you if you should wish to stay?
(1)________Yes (0)________No

63. Approximately how many books does your family have in your home? (Check appropriate category)
(1)________ 0- 9
(2)________10-24
(3)________25-49
(4)________50-99
(5)________100-up

64-65-66. Which of these magazines does your family subscribe to or regularly buy?

64
(1)________Reader's Digest
(2)________Life
(3)________Saturday Evening Post
(4)________Look
(5)________McCall's Magazine
(6)________Ladies Home Journal
(7)________Better Homes and Gardens
(8)________Good Housekeeping
(9)________American Home
(0)________Coronet
(x)________Farm Journal

65
(1)________Redbook
(2)________National Geographic Magazine
(3)________Time
(4)________True
(5)________Parents' Magazine
(6)________Capper's Farmer
(7)________Argosy
(8)________Popular Mechanics
(9)________Popular Science
(0)________Newsweek
(x)________Successful Farming

66
(1)________U. S. News & World Report
(2)________Sports Afield
(3)________Sports Illustrated
(4)________Holiday
(5)________New Yorker
(6)________Fortune
(7)________The Farmer
(8)________Atlantic Monthly
(9)________Harper's

67. Others____

68-69-70. To which of these organizations does your father or mother or both belong?

68
(1)________P.T.A. or Mothers' Club
(2)________American Legion or VFW
(3)________Rotary
(4)________Knights of Columbus
(5)________Elks
(6)________Masons
(7)________Eastern Star
(8)________Odd Fellows
(9)________Rebeccas
(0)________Lions

69
(1)________Moose
(2)________Eagles
(3)________Labor Union
(4)________Farm Bureau
(5)________Farm Union
(6)________Grange

69 (Cont.)
(7)________Chamber of Commerce or Community Business Club
(8)________Kiwanis
(9)________Shrine
(0)________Ladies' Aid

70
(1)________League of Womens Voters
(2)________Neighborhood or other social card playing group
(3)________Country club or golf club
(4)________Study or literary club
(5)________American Automobile Association (AAA)
(6)________A sportsman club
(7)________American Association of University Women
(8)________National origin group (such as Sons of Norway)
(9)________Church club or group
(0)________Athletic club or group
(x)________Hobby club or group
(   ) Others________________________________

The following items are related to your attitudes, feelings, and experiences. Remember that all of the information on this questionnaire is treated as confidential. Circle T if the item is true for you and F if it is false.

21. T F I meet strangers easily.

22. T F I get along as well as the average person in social activities.

23. T F In school I sometimes have been sent to the principal for cutting up.

24. T F I feel self-conscious when reciting in class.

25. T F I am sure I get a raw deal from life.

26. T F I feel at ease with people.

27. T F At times I have very much wanted to leave home.

28. T F I have difficulty in starting a conversation with a person who has just been introduced.

29. T F I find it hard to keep my mind on a task or job.

30. T F I enjoy speaking before groups of people.

31. T F I know who is responsible for most of my troubles.

32. T F My parents have often objected to the kind of people I go around with.

33. T F I am rather shy in contacts with people.

34. T F No one seems to understand me.

35. T F I enjoy entertaining people.

36. T F My family does not like the work I have chosen or the work I intend to choose for my life work.

37. T F I like to meet new people.

38. T F My parents and family find more fault with me than they should.

39. T F I dislike social affairs.

40. T F If people had not had it in for me I would have been much more successful.

41. T F I find it easy to express my ideas.

42. T F I wish I were not so shy.

43. T F I avoid people when it is possible.

44. T F I have had very peculiar and strange experiences.

45. T F I stay in the background at parties or social gatherings.

46. T F Most of my close friends are planning to go to college.

47. Would you say that your high school grades are a fairly accurate reflection of your ability?

1.________Yes 2.________No

48. Do you think that most of the important things that happen to people are: (Check one)

(1)________More the result of circumstances beyond their control.
(2)________More the result of their own efforts.

49. If you had your choice, which type of job would you pick? (Check one)

(1)________A job which pays quite a low income but which you are sure of keeping.
(2)________A job which pays a good income but which you have a 50-50 chance of losing.
(3)________A job which pays an extremely good income if you make the grade but in which you lose almost everything if you don't make it.

Appendix [illegible]

LETTERS TO SCHOOLS

Dear Superintendent:

The U.S. Office of Education has provided support for a three-year study of the determinants of plans of high school seniors. The study was proposed by the Student Counseling Bureau of the University of Minnesota with the endorsement of the High School-College Relations Committee, the Minnesota Association of Secondary School Principals, and the Minnesota Counselors' Association.

As part of this study, last year we asked all seniors to complete a questionnaire about their plans. In addition to studying the plans of students in 1961, it was also possible to compare these plans with those obtained in a parallel study conducted in 1950. A small group of schools in which considerable changes have taken place in students plans are to be further studied to identify changes in school conditions which are related to changes in plans.

Your school was one in which such changes have occurred during the past decade and we are interested in some of the characteristics of your school which might be related to these changes. Therefore we are asking your cooperation in completing a questionnaire dealing with the conditions and changes in your school system and in your community over the past eleven years.

The information obtained will be used only in this study and neither you nor your school will be identified in any way in any presentation of the findings. A summary report will be prepared for each of the participating schools. Naturally you will not wish to decide whether or not to participate without seeing a copy of the questionnaire therefore we do not expect an answer to this letter. In about a month we will send you further information and enclose the questionnaire.

We are most appreciative of the cooperation you gave us last year in this study and hope that as one of a smaller sample of schools you will be willing to help us again in this phase of the project. We hope that the information we obtain will be helpful to every school to improve its services and programs.

Yours sincerely,

Ralph F. Berdie
Professor of Psychology
and Director

Albert B. Hood
Assistant Professor
and Student Personnel Worker

RFB:ga:dz

March 30, 1962

Dear Superintendent:

About a month ago we wrote asking if you would help us in a part of our study concerned with the plans of high school seniors. Your school was one of those in which there has been a considerable change in the post-high school plans of your students over the past decade. We hope you will be willing to complete the enclosed questionnaire dealing with various charecteristics of your high school and your community.

Our original study was conducted in 1950 and a similar one was carried out last year. Therefore, the questionnaire is concerned with these characteristics as they are now and as they were back in 1950.

We realize that some of the information asked for may not be readily available to you; so do not feel it necessary to spend a great deal of time searching out precise answers. We would, however, appreciate your providing the best estimates possible based on material readily available to you.

We appreciate the cooperation you gave us last year in the project and hope you will be willing to help us again in this phase of the study. We are asking that the questionnaire be returned to us before May 1, 1962, so we can complete our analysis under the terms of our grant from the U.S. Office of Education.

Yours sincerely,

Ralph F. Berdie
Professor of Psychology
and Director

Albert B. Hood
Assistant Professor
and Student Personnel Worker

RFB:gc:dz